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MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOLUME VI—JANUARY TO JUNE, 1918

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COST OF LIVING IN THE DISTRICT OF COLUMBIA.

FOURTH ARTICLE—WAGE-EARNING WOMEN: WHO THEY ARE AND WHAT THEY DO.

As a part of the cost of living study in the District of Columbia for the year 1916 a special study was made of wage-earning women. This special study was made for the purpose of finding out how working women live, with special reference to the manner in which they apportion the expenditure of their incomes as between food, clothing, room rent, and the other items of expense. The study was confined to women receiving incomes less than $1,100 a year. The study must not be regarded as a study in philanthropy, poverty, and crime, because of this exclusion of the higher incomes. The fact is, very few working women receive more than $1,000 a year. The vast majority receive much less than $1,000 a year and these are the socially significant women wage earners. It is of immense importance to know how these women live, whether they live at home or away from home, whether their meager earnings are supplemented out of the general family funds or whether their earnings must support the wage earner and help out the insufficient income of the family, and whether they obtain sufficient nourishment, clothing, and the other essentials to enable them to live healthy and comfortable lives. Of course in some instances women receiving higher incomes have such demands to meet as force them down to or below the "poverty line." Also it may be argued that the extravagance of the better paid women workers is as significant, economically and socially, as the rigorous economy of the poorly paid women. For the purpose of this study this argument is of no importance.

In the selection of women workers to furnish the information required in this study the effort was made to obtain a fair representation from the various industrial employments open to women in the city of Washington. No occupations, except those of trained nurse, domestic servant, and washerwoman, were excluded.

Except in a few very unusual cases, such as protracted illness, no woman was included who had not worked during at least nine calendar months of the year 1916, unless the occupation was seasonal in character and so failed to furnish nine months' employment during the year. Thus the merely occasional or intermittent workers were excluded, and the study limited to women who were regularly engaged in wage-earning employments.

This study is based upon schedules for the year 1916, secured through personal visits and interviews by agents of the bureau. These interviews were obtained either at the girl's home or her place of employment, in the latter case through the cooperation of her employer, who allowed her to be questioned during working hours. In almost all instances the women visited were willing to give the desired information. In the final tabulation of results only those schedules were used in which the information obtained was believed to be complete and accurate.

The total number of schedules thus obtained was 676, of which 600 were from white women and 76 from colored women. The present article is concerned solely with the former group, inasmuch as the industrial employment and living conditions of the two races were found to be too dissimilar to permit of combined treatment. Also, it is to be noted that this article is limited to a general consideration of the personal and working conditions of the 600 white wage-earning women. An analysis of their living conditions—housing, food, clothing, etc.—will appear in a succeeding article.

INDUSTRIES AND OCCUPATIONS REPRESENTED.

The employments engaged in by the 600 women were as follows: United States Government employees, 63; office clerks, stenographers, and cashiers in private employment, 172; saleswomen, 192; telephone operators, 38; factory workers, 95; waitresses in hotels and restaurants, 12; and laundry workers, 28.

The employments here represented may be taken as fairly typical of woman's work in the District of Columbia, although the numbers shown are not necessarily proportionate to the total numbers engaged in the several industries. This is particularly true of the employees of the Federal Government, as no effort was made to cover at all fully the better paid Government employees. Of the 63 for whom schedules were obtained the majority were operatives and printers' assistants at the Bureau of Engraving and Printing. The others were clerks and stenographers in various departments, employees of the Congressional Library and Capitol, and one charwoman. Two schoolteachers and one librarian employed by the District of Columbia are also here included as Government employees.

As regards the factory work covered, a word of reminder is necessary. Washington is unique among the large cities of the country in having very few manufacturing industries. Those existing are mostly small, and, altogether, employ comparatively few persons. The women here classed as factory workers represent a number of miscellaneous trades—box making, cigar manufacture, candy making, tailoring, printing, and publishing. A number of seamstresses and milliners are also included in this group.

Operatives and printers' assistants at the United States Bureau of Engraving and Printing are engaged in work of a mechanical or manufacturing nature, but in this study they have been grouped under United States Government employees, inasmuch as their other conditions of employment—such as permanent tenure of position—are quite different from those of privately controlled industry.

RACE, MARITAL CONDITION, AGE, AND EXPERIENCE.

As practically all of the women covered were either native Americans or of English-speaking families of long residence, no racial separation seemed necessary. The race factor, indeed, except that of white and colored, seems to be of very little significance among the wage-earning women of the District, either as regards wage-earning capacity or as regards living conditions.

As regards marital condition, 542 of the 600 women were single, while 58 had been married and were either widowed, divorced, or separated at the time of the investigation. It is interesting to note that 15 of the 58 married women had children dependent on them for support.

In the matter of age there was a wide distribution. None was under 16 years of age, and only 26, or 4 per cent, were between 16 and 18 years, whereas 142, or 24 per cent, were between 18 and 21, and 432, or 72 per cent, were 21 years of age or over. There were 144, or 24 per cent, 30 years old and above. One very interesting case was that of a woman of 75, so crippled with rheumatism that she could not get out without great difficulty, trying to save herself from dependence by doing dressmaking.

Also, these women were not beginners in industry. Not less than 62 per cent had been wage earners for at least five years, and as many as 5 per cent had been wage earners for 20 years or more.

ANNUAL INCOME.

The lowest income received by any of these workers was $130.50 per year. This was received by a sales girl, age 17, her maximum wage being $4 per week, and 10 weeks being lost through inability to find work. There were only two other girls who had received

less than $150 per year. But 274, or 46 per cent of the total, received under $400 per year—approximately $8 per week—and 381, or 64 per cent, received under $500 per year—approximately $10 per week. Only 35 women, or 6 per cent, received as much as $800 a year—approximately $16 per week.

The following table shows the distribution of the 600 women by annual income and age groups. The annual income here referred to is the total amount of money income received during the year. Gifts of new articles were credited as money income, but no other gifts except actual money were so included. In all cases the earnings from labor constituted the major part of total income, but in a limited number of cases money gifts from parents and relatives, and returns from savings and investments were of considerable importance.

AGE AND ANNUAL INCOME.

Annual income.	Total.	Under 18	18 and under 21	21 and under 25	25 and under 30	30 and under 40	40 and over.
Under $300	133	21	53	25	9	8	17
$300 and under $400	141	3	53	51	14	13	7
$400 and under $500	107	1	14	33	29	14	16
$500 and under $600	88	1	9	32	28	15	3
$600 and under $700	53	.....	7	15	13	13	5
$700 and under $800	43	.....	3	5	18	11	6
$800 and under $1,100	35	.....	3	6	10	14	2
Total	600	26	142	167	121	88	56

AT HOME AND AWAY FROM HOME.

Of the 600 women, 414, or 69 per cent, lived at home with their immediate families, all but 51 of these living with parents. The remaining 186, or 31 per cent, lived away from home, either in private families, in boarding houses, in working-girls' homes, or were housekeeping in lodgings on their own account. Their distribution on this point is shown in the following table, by income groups:

LIVING CONDITIONS AND ANNUAL INCOME.

Annual income.	Total.	At home.	Away from home.				
			Total.	Private families.	House-keeping.	Boarding houses.	Homes for working girls.
Under $300	133	100	33	15	13	.....	5
$300 and under $400	141	105	36	19	8	5	4
$400 and under $500	107	74	33	14	12	6	1
$500 and under $600	88	54	34	17	7	7	3
$600 and under $700	53	37	16	3	7	3	3
$700 and under $800	43	24	19	10	8	1	.....
$800 and under $1,100	35	20	15	6	3	3	3
Total	600	414	186	84	58	25	19

It is to be emphasized that living at home does not necessarily mean that a woman is assisted by her family. Usually, such a woman is in a more favorable economic position than women away from home, inasmuch as she has assistance at hand in case of sickness or unemployment. But this is not always the case, as many of the women listed above as living at home were not only supporting themselves, but were also supporting their families in whole or in part. Moreover, many girls stayed at home when they might have secured better positions and more independence by going to some other place, because they felt their services or companionship in the home was needed by their parents even when no financial assistance was given to the family.

DEGREE OF SELF-SUPPORT.

The degree in which women workers may be receiving assistance from their families or other sources is a very important factor in the industrial world, for to the extent that such workers are having their regular wage supplemented by outside assistance, they are able to offer their services in the labor market at lower rates than are workers entirely dependent on their own resources. The most frequent example of this sort of subsidized labor is that of girls living at home and receiving board and lodging free or at nominal rates.

Of the 600 women included in this study, 272, or 45 per cent, were found to be in receipt of outside assistance. The remaining 328, or 55 per cent, were entirely self-supporting, and in addition, 129 of these 328 had other persons wholly or partially dependent upon them for support.

In this grouping into "assisted" and "self-supporting," the effort was made to group as self-supporting only those women who received no contribution to their living expenses from their families or others. Thus a number of cases were placed in the "assisted" group, in which the assistance received was comparatively slight. On the other hand, in a number of cases a girl was classed as self-supporting when she probably could not have obtained the same living conditions at the same price commercially, and so the two groups would balance each other to a large extent.

At best, the question of assistance is one that often can not be readily determined. Usually it is in the form of board or lodging without pay or at reduced rates. But sometimes, particularly with women living at home, assistance is given in forms impossible to trace. The facts here presented were obtained by very careful inquiry, and the classifications are as accurate as it is possible to make them.

As would be expected, assistance occurred chiefly among the women workers with the small annual incomes. Thus of the 274 women with incomes of less than $400 per year (approximately $8 per week), 203, or 74 per cent, were assisted. On the other hand, 6 women, or 17 per cent, of those receiving $800 or more per year were assisted. These, in part, belonged to what might be called the "pin money" group—young women of well-to-do families. On the whole, however, this investigation found very few women of this class. Certainly 99 per cent of all those included were working because working was necessary.

The following table gives detailed data by income groups showing the number of women living at home or away from home and whether they were assisted or self-supporting, and with or without dependents:

ANNUAL INCOME AND LIVING CONDITIONS.

Annual income.	Total.	At home.			Away from home.		
		Assisted.	Self-supporting.	Self-supporting with dependents.	Assisted.	Self-supporting.	Self-supporting with dependents.
Under $300	133	91	5	4	16	15	2
$300 and under $400	141	76	17	12	20	13	3
$400 and under $500	107	28	29	17	5	22	6
$500 and under $600	88	15	19	20	3	18	13
$600 and under $700	53	9	15	13	2	11	3
$700 and under $800	43	.....	11	13	1	10	8
$800 and under $1,100	35	4	4	12	2	10	3
Total	600	223	100	91	49	99	38
		414			186		

WAGES AND YEARS OF SERVICE.

The present study was not a wage investigation.[1] It was concerned primarily with the cost and manner of living of working women, and here the determining factor is the total amount of annual income, not the daily or weekly wage rate.

Nevertheless the wage rates at which this group of 600 women were working are very significant, and particularly so when studied in relation to the number of years at work. That an inexperienced girl or woman should start work at a low wage is not especially important, although the wage of apprentice girls should bear some relation to the cost of living. There is a widespread notion, however, that a woman who lives at home ought to be willing and grateful to work for wages insufficient to support a woman living independently

[1] An investigation of hours, earnings, and duration of employment of wage earning women in the District of Columbia was made in 1913 by the Bureau of Labor Statistics. The results were published in Bulletin 116.

of all family assistance. Aided and abetted by this hoary economic fallacy many parasitic industries and trades have been able to live and even to achieve much prosperity on the subsidies contributed by working women. It ought not to be necessary to point out that no woman who is mentally competent and who has worked at an occupation long enough to acquire proficiency ought to be required or requested to work for a wage insufficient to enable her to live in reasonable comfort. Industries or occupations, if such there be, which can not live except on the subsidies from family incomes contributed by exploited women and child workers, ought to die—the sooner the better for the nation and the world at large.

It is therefore extremely significant to note that the majority of the women covered by this study were not only working at distressingly low wages, but that a very large proportion of them were women who had been wage earners for many years. Thus of a total of 600, 316, or 53 per cent, were receiving less than $9 per week at the end of the year 1916, and of these 316, 145, or 46 per cent, had been engaged at some gainful work for five years or more. Still more striking is the fact that of 80 women who had been at work for 15 years barely one-third were receiving as much as $12 per week. The detailed data on this point are shown in the following table, which gives the wage rates of women employees classified according to the number of years they had been working for wages. For convenience of comparison all wages and salaries are shown on a weekly basis. In this table the data are for all occupations combined. Data for separate employments are given in Table 2 at the end of this article.

WEEKLY WAGES AND NUMBER OF YEARS WORKING FOR WAGES.

Weekly wages.	Total.	Number of women working specified number of years for wages.								
		1 and under 2	2 and under 3	3 and under 4	4 and under 5	5 and under 10	10 and under 15	15 and under 20	20 and under 30	30 and under 60
Under $6	89	24	16	13	10	15	3	2	3	3
$6 and under $7	84	9	15	13	11	23	7	5	.....	1
$7 and under $8	63	4	9	6	4	29	6	2	2	1
$8 and under $9	80	10	8	10	9	29	8	3	1	2
$9 and under $10	48	2	1	5	4	23	4	4	2	3
$10 and under $12	104	3	8	3	9	43	22	9	6	1
$12 and under $15	77	1	3	5	4	21	27	12	3	1
$15 and under $20	55	1	2	3	1	24	10	11	2	1
Total	600	54	62	58	52	207	87	48	19	13

SCHOOLING AND ITS RELATION TO WAGES.

The majority of the 600 women interviewed had received a fair amount of schooling, 397, or about two-thirds, having completed the eighth grade, and 93 had also attended high school or college.

When, with a fairly good education to start with, a woman is receiving very low wages, particularly after several years' industrial experience, it may be safely concluded that something is radically wrong either with her training or with the industrial system. It was, therefore, disconcerting to find that so many of the women with good schooling were receiving such low wages even after five years or more in the working world. Of the 238 having eighth grade or higher education who had been at work for five years or more, 57, or 24 per cent, were receiving under $9 a week, and 84, or 35 per cent, were receiving under $10. Of 10 women with college training, only 4 (all United States Government employees) were receiving more than $15 per week, and 4 others were receiving under $12 a week. Three of these latter four were employed as saleswomen, one because teaching had geen too great a nervous strain for her.

The following table classifies the 374 women who had been at work for five years or more by wage and amount of schooling. This table gives data for all occupations combined. Table 3, at the end of the article, gives the same information by separate employments.

WEEKLY WAGES OF 374 WOMEN WHO HAD BEEN AT WORK AT LEAST 5 YEARS, CLASSIFIED ACCORDING TO AMOUNT OF SCHOOLING.

Weekly wages.	Total.	Number of women having specified amount of schooling.							
		1st, 2d, or 3d grade.	4th or 5th grade.	6th or 7th grade.	8th grade.	1st or 2d year in high school.	3d or 4th year in high school.	College.	Normal.
Under $6	26	3	10	7	6	.....	.....	.....	.....
$6 and under $7	36	.....	3	18	13	2	.....	.....	.....
$7 and under $8	40	1	6	17	14	2	.....	.....	.....
$8 and under $9	43	1	3	19	13	5	1	1	.....
$9 and under $10	36	1	3	5	20	6	.....	1	.....
$10 and under $12	81	1	4	16	39	14	5	2	.....
$12 and under $15	64	2	6	8	22	16	7	2	1
$15 and under $20	48	.....	.....	2	18	12	10	4	2
Total	374	9	35	92	145	57	23	10	3

The following tables give in detail the occupation, home conditions, income, years at work for wages, and schooling of the women studied.

TABLE 1.—OCCUPATIONS AND HOME CONDITIONS, BY INCOME GROUPS.

Occupations and home conditions (economic status).	Total women studied.	Number of women whose annual income was— Under $300.	$300 and under $400.	$400 and under $500.	$500 and under $600.	$600 and under $700.	$700 and under $800.	$800 and under $1,100.
United States employees.								
At home:								
Assisted	7		1	1	1	3		1
Self-supporting	11				3	4	3	1
Self-supporting with dependents	15				2	1	6	6
Away from home:								
Assisted	1							1
Self-supporting	20	1			8	3	3	5
Self-supporting with dependents	9				3		5	1
Total	63	1	1	1	17	11	17	15
Office employees.								
At home:								
Assisted	79	26	23	14	9	4		3
Self-supporting	40		5	16	3	7	7	2
Self-supporting with dependents	21		5	2	5	2	2	5
Away from home:								
Assisted	8	3	1		2	1		1
Self-supporting	15			4	3	1	4	3
Self-supporting with dependents	9		1	1	4	1	1	1
Total	172	29	35	37	26	16	14	15
Saleswomen.								
At home:								
Assisted	87	43	29	11	3	1		
Self-supporting	14		5	3	4	1		1
Self-supporting with dependents	32		4	13	7	5	2	1
Away from home:								
Assisted	22	5	12	2	1	1	1	
Self-supporting	25	5	5	6	2	4	2	1
Self-supporting with dependents	12			3	5	1	2	1
Total	192	53	55	38	22	13	7	4
Telephone operators.								
At home:								
Assisted	10	1	8		1			
Self-supporting	13			2	7	3	1	
Self-supporting with dependents	6				2	3	1	
Away from home:								
Assisted	2	1		1				
Self-supporting	5			1	3	1		
Self-supporting with dependents	2			1	1			
Total	38	2	8	5	14	7	2	
Factory workers.								
At home:								
Assisted	32	16	14	1		1		
Self-supporting	19	5	6	6	2			
Self-supporting with dependents	12	1	2	2	3	2	2	
Away from home:								
Assisted	9	3	4	2				
Self-supporting	21	5	4	9		2		1
Self-supporting with dependents	2	1		1				
Total	95	31	30	21	5	5	2	1
Waitresses.								
At home:								
Assisted								
Self-supporting	1		1					
Self-supporting with dependents	1		1					

TABLE 1.—OCCUPATIONS AND HOME CONDITIONS, BY INCOME GROUPS—Concluded.

Occupations and home conditions (economic status).	Total women studied.	Number of women whose annual income was—						
		Under $300.	$300 and under $400.	$400 and under $500.	$500 and under $600.	$600 and under $700.	$700 and under $800.	$800 and under $1,100.
Waitresses—Concluded.								
Away from home:								
Assisted								
Self-supporting	7		3	2	1		1	
Self-supporting with dependents	3		2			1		
Total	12		7	2	1	1	1	
Laundry workers.								
At home:								
Assisted	8	5	1	1	1			
Self-supporting	2			2				
Self-supporting with dependents	4	3			1			
Away from home:								
Assisted	7	4	3					
Self-supporting	6	4	1		1			
Self-supporting with dependents	1	1						
Total	28	17	5	3	3			

TABLE 2.—WEEKLY WAGES AND NUMBER OF YEARS WORKING FOR WAGES.

Occupations and weekly wages.	Total women studied.	Number of women working specified number of years for wages.								
		1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 30.	30 and under 60.
United States employees:										
Under $6	1						1			
$6 and under $7										
$7 and under $8										
$8 and under $9	1			1						
$9 and under $10										
$10 and under $12	20	1	2		3	9	4		1	
$12 and under $15	22			1		7	9	1	1	
$15 and under $20	19	1	2	2	1	8	1	4		
Total	63	2	4	4	4	24	15	8	2	
Office employees:										
Under $6	17	3	2	4	2	6				
$6 and under $7	24	6	5	4	3	3	3			
$7 and under $8	14	1	5	3		5				
$8 and under $9	27	8	5	1	6	5	2			
$9 and under $10	15	1	1	5	1	5	1	1		
$10 and under $12	30	2	5	1	3	14	2	3		
$12 and under $15	23	1	2	3	4	8	5			
$15 and under $20	22			1		14	5	2		
Total	172	22	25	22	19	60	18	6		
Saleswomen:										
Under $6	41	17	10	6	1	4				
$6 and under $7	38	2	6	7	6	13	2	2		
$7 and under $8	27		2	2	4	14	4	1		
$8 and under $9	21			1		16	2	1	1	
$9 and under $10	12					7	2	2	1	
$10 and under $12	31		1	1	2	8	10	5	3	1
$12 and under $15	11		1	1			4	3	2	
$15 and under $20	11					1	3	5	2	
Total	192	19	20	18	16	63	27	19	9	1

TABLE 2.—WEEKLY WAGES AND NUMBER OF YEARS WORKING FOR WAGES—Concluded.

Occupations and weekly wages.	Total women studied.	Number of women working specified number of years for wages.								
		1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 30.	30 and under 60.
Telephone operators:										
Under $6	1		1							
$6 and under $7	3	1	1		1					
$7 and under $8	5	1	1	1		1	1			
$8 and under $9	8	1	1	3	1	2				
$9 and under $10	11				2	9				
$10 and under $12	6			1		4	1			
$12 and under $15	4					2	2			
$15 and under $20										
Total	38	3	4	5	4	18	4			
Factory workers:										
Under $6	15	4	1	3	1	2	1	1		2
$6 and under $7	12		2	2		4	1	2		1
$7 and under $8	12	1	1			6		1	2	1
$8 and under $9	19	1	1	3	2	5	3	2		2
$9 and under $10	8					2	1	1	1	3
$10 and under $12	12				1	6	3	1	1	
$12 and under $15	14					4	5	4		1
$15 and under $20	3					1	1			1
Total	95	6	5	8	4	30	15	12	4	11
Waitresses:[1]										
Under $6										
$6 and under $7	3		1			2				
$7 and under $8	2	1				1				
$8 and under $9	1			1						
$9 and under $10	2	1			1					
$10 and under $12	1						1			
$12 and under $15	3						2	1		
$15 and under $20										
Total	12	2	1	1	1	3	3	1		
Laundry workers:										
Under $6	14		2		3	3	1	1	3	1
$6 and under $7	4				1	1	1	1		
$7 and under $8	3					2	1			
$8 and under $9	3		1			1	1			
$9 and under $10										
$10 and under $12	4					2	1		1	
$12 and under $15										
$15 and under $20										
Total	28		3		4	9	5	2	4	1

[1] In all cases waitresses received one or more meals at place of employment, but in no case was lodging included.

TABLE 3.—WEEKLY WAGES OF WOMEN WHO HAD WORKED AT LEAST 5 YEARS CLASSIFIED ACCORDING TO AMOUNT OF SCHOOLING.

Occupations and weekly wages.	Total women at work 5 years or over.	Number of women having specified amount of schooling.							
		1st, 2d, or 3d grade.	4th or 5th grade.	6th or 7th grade.	8th grade.	1st or 2d year in high school.	3d or 4th year in high school.	College.	Normal.
United States employees:									
Under $6	1		1						
$6 and under $7									
$7 and under $8									
$8 and under $9									
$9 and under $10									
$10 and under $12	14			2	7	3	1	1	
$12 and under $15	21			1	10	5	3	1	1
$15 and under $20	13				1	2	5	4	1
Total	49		1	3	18	10	9	6	2

TABLE 3.—WEEKLY WAGES OF WOMEN WHO HAD WORKED AT LEAST 5 YEARS CLASSIFIED ACCORDING TO AMOUNT OF SCHOOLING—Concluded.

Occupations and weekly wages.	Total women at work 5 years or over.	Number of women having specified amount of schooling.							
		1st, 2d, or 3d grade.	4th or 5th grade.	6th or 7th grade.	8th grade.	1st or 2d year in high school.	3d or 4th year in high school.	College.	Normal.
Office employees:									
Under $6	6			2	4				
$6 and under $7	6		1	1	3	1			
$7 and under $8	5			1	3	1			
$8 and under $9	7		1	2	2	2			
$9 and under $10	7				4	3			
$10 and under $12	19				8	8	3		
$12 and under $15	13				2	6	4	1	
$15 and under $20	21			1	6	9	4		1
Total	84		2	7	32	39	11	1	1
Saleswomen:									
Under $6	4		1	1	2				
$6 and under $7	17		1	12	4				
$7 and under $8	19		2	8	8	1			
$8 and under $9	20			8	8	2	1	1	
$9 and under $10	12		1	4	5	1		1	
$10 and under $12	27		2	8	13	2	1	1	
$12 and under $15	9		1	4	3	1			
$15 and under $20	11				10	1			
Total	119		8	45	53	8	2	3	
Telephone operators:									
Under $6									
$6 and under $7									
$7 and under $8	2			1	1				
$8 and under $9	2			2					
$9 and under $10	9				7	2			
$10 and under $12	5			2	2	1			
$12 and under $15	4				4				
$15 and under $20									
Total	22			5	14	3			
Factory workers:									
$3 and under $6	6	1	4	1					
$6 and under $7	8			2	5	1			
$7 and under $8	10	1	3	4	2				
$8 and under $9	12	1		7	3	1			
$9 and under $10	8	1	2	1	4				
$10 and under $12	11	1		4	6				
$12 and under $15	14	2	3	2	3	4			
$15 and under $20	3			1	1		1		
Total	72	7	12	22	24	6	1		
Waitresses:									
$3 and under $6									
$6 and under $7	2		1	1					
$7 and under $8	1		1						
$8 and under $9									
$9 and under $10									
$10 and under $12	1				1				
$12 and under $15	3		2	1					
$15 and under $20									
Total	7		4	2	1				
Laundry workers:									
Under $6	9	2	4	3					
$6 and under $7	3			2	1				
$7 and under $8	3			3					
$8 and under $9	2		2						
$9 and under $10									
$10 and under $12	4		2		2				
$12 and under $15									
$15 and under $20									
Total	21	2	8	8	3				

REPORT OF PRESIDENT'S MEDIATION COMMISSION, CONDEMNING DEPORTATIONS FROM WARREN DISTRICT OF ARIZONA.

The mediation commission appointed by the President to promote peaceful industrial relations has submitted its findings and recommendations in regard to the labor disturbance which occurred in the copper-mining industry, in the Warren district of Arizona, during June and July, 1917. This disturbance culminated in the rounding up of 1,186 men and their deportation to Columbus, N. Mex., by the sheriff of Cochise County and his deputies.

According to the Official Bulletin for November 27, 1917, the President has acted on the recommendation that certain features of the report be referred to the Attorney General and to the Interstate Commerce Commission.

Following is the report in full:

BISBEE, ARIZ., *November 6, 1917.*

THE PRESIDENT:

The deportations on the 12th of July last from the Warren district of Arizona, as well as the practices that followed such deportations, have deeply affected the opinions of laboring men, as well as the general public, throughout the country. These events have even been made the basis of an attempt to affect adversely public opinion among some of the people of the Allies. Their memory still embarrasses the establishment of industrial peace for the period of the war, and it is indispensable to obtain and maintain industrial peace if the war is to be brought to the quickest possible successful conclusion and if lives are not to be needlessly sacrificed.

SAFEGUARDING THE FUTURE.

The President's mediation commission is charged rather with helping to secure peaceful industrial relations for the future than to sit in judgment upon the errors of the past. But it is impossible to make for peace in the future unless the recurrences of such instances as the Bisbee deportations are avoided. The future can not be safeguarded against such recurrences unless a candid and just statement is made of the facts surrounding the Bisbee deportation and an understanding is had of the conditions which brought it about. Such candor is necessary for the guidance of all in their future conduct. Such candor is also necessary because if the truth be authoritatively set forth there will be no basis for any misrepresentation of the facts either through ignorance or design.

The President's mediation commission has therefore deemed it a duty which it could not avoid to undertake a thorough and impartial consideration of the facts surrounding the deportations of the 12th

of July and the practices which have been pursued since the deportation by officials and citizens of Cochise County.

FINDINGS BY COMMISSION.

After hearing the representatives of the different elements involved in the deportation, both official and private, the President's mediation commission makes these findings:

(1) A strike was called in the Warren district on June 26, 1917, to be effective the following day. While undoubtedly the men sincerely felt that several grievances called for rectification by the companies, having regard to the conditions in this district and the Government's need for its copper production, the grievances were not of such a nature as to have justified the strike. Here, as elsewhere, there was, however, no machinery for the adjustment of difficulties between the companies and the men which provided for the determination of alleged grievances by some authoritative and disinterested tribunal in which both the companies and the men had confidence and before which they had an equal opportunity of urging their respective claims. This is a fundamental difficulty in the settlement of grievances that may arise in this district, and here, as in the other mining camps in Arizona visited by the President's mediation commission, a plan has been worked out establishing such machinery whereby in the future, at least during the period of the war, grievances will be settled by an orderly, impartial process, and the resort to strike or lockout will be wholly without foundation.

NOT ALL IN SYMPATHY.

(2) Many of those who went out did not in fact believe in the justice of the strike, but supported it, as is common among workingmen, because of their general loyalty to the cause represented by the strikers and their refusal to be regarded in their own estimation, as well as in the minds of fellow workers, as "scabs."

(3) Shortly after the strike was called the sheriff of the county, through the governor of Arizona, requested the aid of Federal troops. The request was based on the fact that the State militia had been drafted into the Federal service and the State, therefore, was without its normal militia protection. Gov. Campbell recommended to the Secretary of War that an immediate investigation of the situation at Bisbee be made by a Regular Army officer in order to ascertain the need of troops. The governor's recommendation was followed and an investigation of the situation in Bisbee was made by an experienced officer. Such investigation was made on June 30 and again on July 2, and after both investigations the officer reported that every-

thing was peaceable and that troops were neither needed nor warranted under existing conditions.

(4) That the conditions in Bisbee were, in fact, peaceful and free from any manifestations of disorder or violence is the testimony of reputable citizens, as well as of officials of the city and county, who are in a position to report accurately and speak without bias.

DEPORTED FROM WARREN DISTRICT.

(5) Early on the morning of July 12 the sheriff and a large armed force presuming to act as deputies under the sheriff's authority, comprising about 2,000 men, rounded up 1,186 men in the Warren district, put them aboard a train, and carried them to Columbus, N. Mex. The authorities at Columbus refused to permit those in charge of the deportation to leave the men there, and the train carried them back to the desert town of Hermanas, N. Mex., a nearby station. The deportees were wholly without adequate supply of food and water and shelter for two days. At Hermanas the deported men were abandoned by the guards who had brought them and they were left to shift for themselves. The situation was brought to the attention of the War Department, and on July 14 the deportees were escorted by troops to Columbus, N. Mex., where they were maintained by the Government until the middle of September.

(6) According to an Army census of the deported men 199 were native-born Americans, 468 were citizens, 472 were registered under the selective-draft law, and 433 were married. Of the foreign born, over 20 nationalities were represented, including 141 British, 82 Serbians, and 179 Slavs. Germans and Austro-Hungarians (other than Slavs) were comparatively few.

PLANNING OF THE DEPORTATION.

(7) The deportation was carried out under the sheriff of Cochise County. It was formally decided upon at a meeting of citizens on the night of July 11, participated in by the managers and other officials of the Copper Queen Consolidated Mining Co. (Phelps-Dodge Corporation, Copper Queen division) and the Calumet & Arizona Mining Co. Those who planned and directed the deportation purposely abstained from consulting about their plans either with the United States attorney in Arizona, or the law officers of the State or county, or their own legal advisers.

(8) In order to carry the plans for the deportation into successful execution, the leaders in the enterprise utilized the local offices of the Bell Telephone Co., and exercised or attempted to exercise a

censorship over parts of interstate connections of both the telephone and telegraph lines, in order to prevent any knowledge of the deportation reaching the outside world.

NO VIOLENCE BY THE STRIKERS.

(9) The plan for the deportation and its execution are attributable to the belief in the minds of those who engineered it that violence was contemplated by the strikers and sympathizers with the strikers who had come into the district from without, that life and property would be insecure unless such deportation was undertaken, and that the State was without the necessary armed forces to prevent such anticipated violence and to safeguard life and property within the district. This belief has no justification in the evidence in support of it presented by the parties who harbored it.

(10) Neither such fear on the part of the leaders of the deportation as to anticipated violence nor evidence justifying such fear was ever communicated to the governor of the State of Arizona with a view to renewing the request for Federal troops, based upon changing conditions, nor were the Federal authorities in fact ever apprised that a change of conditions had taken place in the district from that found by the investigating Army officer to call for or warrant the interposition of Federal troops.

DEPORTATION WHOLLY ILLEGAL.

(11) The deportation was wholly illegal and without authority in law either State or Federal.

(12) Following the deportation of the 12th, in the language of Gov. Campbell, of Arizona, "the constitutional rights of citizens and others have been ignored by processes not provided by law, viz, by deputy sheriffs who refused persons admittance into the district and the passing of judgment by a tribunal without legal jurisdiction resulting in further deportations."

(13) Immediately after the first deportation, and until late in August, the function of the local judiciary was usurped by a body which to all intents and purposes was a vigilance committee, having no authority whatever in law. It caused the deportation of large numbers of others. So far as this committee is concerned, its activities were abandoned at the request of the governor of Arizona late in August.

(14) Among those who were deported from the district and who thereafter were arrested in seeking entrance into it were several who were registered under the selective-draft law and sought to return or remain in the district in order to discharge their legal duty of reporting for physical examination under the draft.

"RECOMMENDATIONS MADE INEVITABLE."

These findings of facts make certain recommendations by the President's mediation commission inevitable.

1. All illegal practices and the denial of rights safeguarded by the Constitution and statutes must at once cease. The right of unimpeded admittance into the Warren district of all who seek entrance into it in a lawful and peaceable manner must be respected. The right of all persons freely to move about in the Warren district or to continue to reside within it must be scrupulously observed except in so far as such right is restricted by the orderly process of the law. To this end we have directed letters to Gov. Campbell and Sheriff Wheeler, of Cochise County.

2. In so far as the deportation of July 12 and the events following constitute violations of the laws of Arizona, we join in the recommendation of Gov. Campbell that the responsible law officers of the State and county pursue appropriate remedies for the vindication of such laws.

3. In so far as the evidence before the commission indicates interference with the enforcement of the selective-draft law, the facts should be brought to the attention of the Attorney General of the United States.

4. In so far as the evidence before the commission indicates an interference with interstate lines of communication, the facts should be submitted for appropriate attention by the Interstate Commerce Commission.

5. In so far as deportations such as we have set forth have not yet been made a Federal offense, it is our duty to report to the President the wisdom of recommending to the Congress that such occurrences hereafter be made criminal under the Federal law to the full extent of the constitutional authority of the Federal Government.

Respectfully submitted.

THE PRESIDENT'S MEDIATION COMMISSION.
W. B. WILSON, *Chairman.*
J. L. SPANGLER.
E. P. MARSH.
J. H. WALKER.

FELIX FRANKFURTER,
Counsel to the Commission.

TRADE AGREEMENTS IN THE MEN'S CLOTHING INDUSTRY OF NEW YORK CITY.

BY MATTHEW E. GORMLY.

The situation as regards labor conditions in the men's clothing industry in New York City is greatly affected by three outstanding factors—the war, the cessation of immigration, and the split in the ranks of the union garment workers. The first factor, due to the large Government orders for uniforms and other clothing, has created an increasing demand for clothing workers; the second factor has cut off, almost absolutely, the foreign supply of such workers; while the third has made it difficult for the workers to take advantage of the strategic position resulting from the first two and act as a unit to improve working conditions through the instrumentality of collective bargaining.

Our entrance into the war has had a double effect on the men's clothing industry, one neutralizing in a measure the other. The calling of thousands of young men from civilian pursuits to military work naturally resulted in a lessened demand for civilian clothes. This more particularly so because the young man of military age represents the greatest purchasers of men's clothes. Simultaneously, however, with the falling off in the demand for civilian clothes came the demand for vast quantities of military clothing. This latter demand has in New York City been more than sufficient to make up for the decrease in the demand for civilian clothes. Not only has it given full employment to those normally engaged in the manufacture of men's clothing but it has also provided steady employment for the casual workers of the trade. It has thus had a tendency to wipe out the long periods of unemployment so characteristic of the garment trades, an evil which the workers of the industry have always had to contend with and provide against. War orders have had the further effect of giving employment to workers who have never before worked on men's garments. Hundreds, and perhaps thousands, since the number increases daily, of cloak and suit operatives are being employed on uniforms, and many of the workers on other women's garments, such as dresses and waists, are finding employment in the making of cotton uniforms, shirts, barrack bags, etc. Thus the war has tended greatly to increase the number of people employed in the men's clothing industry in New York City.

This increased work, however, has not been accompanied by an orderly expansion of, but has rather resulted in a considerable upsetting and shifting within, the industry. Military work is different from civilian work. Concerns doing military work usually have to put in new machines, since the stitching is different from that on civilian garments. There is also very much less hand tailoring on military work, with a corresponding increase in machine operations. Because of this latter fact, together with the fact that the uniform calls for no vest, there has resulted a lack of employment for two classes of specialized workers—the hand tailors and the vest makers. The vest makers can find employment making trousers, while the less efficient tailors must specialize in operating if they are to continue working in the industry. Thus, besides the increased employment which the military work has brought about, there is, as a result of the same cause, a general shake-up and readjustment going on within the industry.

The second factor contributing to the abnormal situation in the men's clothing industry is the cessation of immigration. Prior to the outbreak of the present war the principal source of the labor supply of the clothing industry was foreign immigration, principally from Russia and Italy. Great numbers of these foreigners have arrived each year in New York City and, lacking funds to go elsewhere, and desiring to stay near their friends, they have glutted the local labor market. Though there were a few tailors among them, the vast majority was unskilled. This large number of workers, able to learn the rudiments of the trade in a short time, kept a constant oversupply of potential garment workers in this market. The fierce competition for employment resulting from this condition, together with the seasonality of the industry, made organized effort next to impossible and stability hardly to be hoped for. The manufacturers had very little capital invested and were just as eager in business competition among themselves as the immigrants they employed were for work. The small capital needed to set up in the clothing business, together with the abundance of cheap labor, resulted in hundreds of small manufacturers springing up, until to-day there are about 2,500 manufacturers employing about 65,000 workers, making New York City the largest center of the manufacture of men's clothing in the country.

The vast reserve of clothing workers has gone. The normal expansion of the industry was not sufficient to use up the reserve at once, and no real shortage of clothing workers was felt until very recently, when the placing of large Government contracts for military work produced an abnormal demand for labor. The present shortage of workers creates an entirely new and unusual condition

in the industry. For the first time the workers are in a position where they can demand more and have a fair chance of getting it without having to work on the sympathies of the public. For the first time they hold the strategic position. This reversal of relative positions of employer and employee has had its effect on their respective attitudes toward trade agreements. The employer now wants to come to an agreement with the union, but the workers are not so anxious. While in normal times they might be willing to enter into an agreement, when they are in a strong position, as at the present time, with conditions so unstable, they desire to be unfettered. The individual worker can strike a good bargain now. He does not need the collective action of the union. Thus the shortage of workers caused by the cutting off of immigration has developed an attitude of independence in the worker which is detrimental to collective agreements.

The third factor which affects the labor conditions in this industry has perhaps a more direct influence on the status of trade agreements than the other two. Without attempting to give the history of the split in the ranks of the men's garment workers, or the merits of the claims of either side, it can be stated that, in New York City at least, each faction has a considerable membership and has been able to negotiate some agreements with associations and individual employers. A large part of the men's garment workers, however, are not working under any agreement. The older organization of garment workers is known as the United Garment Workers of America and is a union affiliated with the American Federation of Labor. The newer faction is made up of the more radical element of garment workers who seceded from the parent organization after the Nashville convention in the fall of 1914 and have since maintained an international organization called the Amalgamated Clothing Workers of America.

The United Garment Workers of America have for many years past entered into agreements with certain manufacturers of clothing, whereby the manufacturer, in return for the right to put a union label on his garment, agreed that union conditions would prevail in his factory. The theory is that men sufficiently interested in organized labor would demand clothing made under union conditions, and the label is the guaranty. The label agreement is in a form stipulated by the union, is printed, and is adhered to absolutely in every part of the country. By this agreement the employer binds himself to run a strictly union shop, employing only members of the United Garment Workers of America. This agreement also provides that 48 hours shall constitute the working week; that children under 16 shall not be employed; that the work shall be distributed equally among the workers during the slack season; that the machines used must be run

by mechanical power, and must be owned by the employer; and that proper sanitary conditions must be maintained, and the provisions of the State factory laws lived up to. On its part the union agrees to advertise the clothing of employers using the label. Provision is made in the agreement for the settlement of disputes. It provides that all disputes that can not be settled by the employer and his employees shall be referred to the general officers of the United Garment Workers of America. In case the latter are unable to effect a settlement the question is to be submitted to an "umpire to be mutually selected for final decision." The agreement does not specifically state that there shall be no strikes or lockouts, but that there shall be none is perfectly understood by both parties. In the matter of wages the different manufacturers agree to pay the union scale. This scale is attached in a supplement to the label agreement and remains in force during the life of such agreement. This scale is elaborately worked out in detail, based on the experience of several years. The prices for the several operations, since most of the workers are paid on a piecework basis, are enumerated in a printed pamphlet. Such modification as may be necessary to meet the conditions in a given shop are made and embodied in the supplement to the agreement.

There are three classes of manufacturers who use the label of the United Garment Workers of America—the manufacturers of ready-made clothing, the special-order houses, and the makers of mechanics' clothing. Under the head of "ready-made" clothing manufacturers are included those who make clothing to sell to the jobber or retailer to be sold off the counter. The "special-order" houses are those who make clothing after the wearer's order has been taken. They are sometimes called the "made-to-measure" or "tailor-to-the-trade" houses. The manufacturers of mechanics' clothing are those making overalls, workmen's trousers, workmen's shirts, duck coats, etc. This latter class represents the largest group using the label. In the city of New York the label of the United Garment Workers is used by 11 manufacturers of ready-made clothing, three manufacturers of clothing on special orders, and six manufacturers of mechanics' clothing. In all they employ about 2,500 workers.

The United Garment Workers of America have been making agreements with manufacturers involving the use of the union label for more than 20 years, the number of agreements and the number of workers covered by them varying from year to year. The agreements are made for one year, but renewal is very often automatic unless some change in conditions is desired. There seems to be general satisfaction with the workings of these agreements, both on the part of the union and on the part of the employers. Both are agreed

that labor strife is reduced to a minimum. They regard the agreement as a binding contract and try to live up to the spirit of it. The union has at different times asked for increases in wages during the life of an agreement, but such cases have been rare and due to unusual conditions. Union officials and manufacturers are unanimous in stating that such controversies as arise pertaining either to wages or other conditions have invariably been settled in a spirit of accommodation and without recourse to industrial warfare.

In addition to their label agreements the United Garment Workers of America have entered into oral "understandings" with several manufacturers who were unwilling to bind themselves absolutely to all the conditions asked by the union. These manufacturers agreed to maintain union shops and the union scale of wages, but often balked at closing their shops to nonunion workers. Such understandings are not considered "agreements" by the union officials, but often act as a wedge, resulting subsequently in written agreements containing all the provisions asked by the union.

Written agreements with seven associations of manufacturers in New York were negotiated by the United Garment Workers of America in 1913, after a big strike in the men's clothing industry. These associations were The Boys' Clothing Manufacturers of Greater New York, The Boys' Wash Suit Manufacturers' Association, The Metropolitan Merchant Tailors' Association, The East Side Retail Clothing Manufacturers' Association, The New York Clothing Trades' Association, The Tailors to the Trade Association, and the American Clothing Manufacturers' Association, the latter three being grouped in one agreement. These five agreements covered about 25,000 employees, or a little less than half of the industry in New York City. The agreements did not involve the use of the union label, but rather were intended to provide the beginnings of a plan to insure better relations between employer and employee, and thus to benefit the industry as a whole.[1]

The factional disputes that arose within the ranks of the union workers and which ended in the secession movement previously mentioned, together with a lack of enthusiasm for the agreements on the part of the employers, practically vitiated the agreements and nullified the start that began so auspiciously in the early spring of 1913. The United Garment Workers have not since renewed these agreements. By the summer of 1915, however, the Amalgamated Clothing Workers had gained sufficient strength to warrant entering into negotiations with some of the associations, and new agreements resulted. These agreements cover two classes of employers—the

[1] These agreements are described in Bul. 198 of the U. S. Bureau of Labor Statistics.

manufacturers of boys' clothing and the manufacturers of men's clothing.

Under the agreement between the Associated Boys' Clothing Manufacturers and the United Garment Workers, signed in 1913, the hours of labor in the boys' clothing industry were reduced to 50. The agreement was so far disregarded, however, that by December, 1915, the prevailing hours were 52, and in many shops more; wages had been reduced, and conditions were almost as bad as before the strike. The Amalgamated Clothing Workers called a strike in that month, and after being out five days, signed, on December 20, an agreement with the association which was to remain in force until April 1, 1918. The association is composed of 69 members, employing, together with the contractors who work for them, about 8,000 workers, or approximately two-thirds of the workers in the boys' clothing industry in New York City. Of the 8,000, about 2,000 work in the inside, or manufacturers', shops, and about 6,000 in outside, or contractors', shops. The manufacturers of the association are bound to employ only such contractors as maintain conditions in their shops equivalent to those provided in the agreement. This agreement fixed the hours at 49, and provided for increases of from 50 cents to $1 a week for operatives, an increase of $1 a week for cutters receiving less than $21, and $1 a week for examiners receiving less than $14. Strikes and lockouts were prohibited, and both parties agreed to submit their differences to a committee on immediate action, which was to be composed of five members, two chosen by each of the parties to the agreement and the chairman, to be an impartial outsider. This committee selected a subcommittee of two to take up first the disputes and try to settle them. In practice this subcommittee is made up of the manager of the association, who is called the labor adviser, and the manager of the joint board of children's clothing of the union. Such disputes as have arisen, excepting those affecting hours and wages in the trade generally, have been settled amicably by this subcommittee in a more or less informal way. Questions regarding hours and wages were referred to a special committee.

In November, 1916, the union asked for a reduction of hours to 48, and a flat increase of $2 a week. After hearings and consideration of the question by a special committee chosen for the purpose, a decision was reached modifying the agreement to the extent of shortening the hours to 48 and granting a flat increase of $1 a week. The week's work still remains at 48 hours, but during the past year several increases in wages have been granted, approximating a general increase of 25 per cent. It seems to be the opinion of both parties that the agreement works well. There have been no strikes or lockouts, and such illegal stoppages as have occurred have been

ended quickly by the action of the union. The union is satisfied with the agreement because it has obtained better conditions under it, but some manufacturers are inclined to believe that, had there been a greater supply of workers, the agreement would not have worked so well.

The Amalgamated Clothing Workers of America are at the present time negotiating an agreement with the Washable Sailor Suit Manufacturers' Association. This association is composed of nine members, employing about 700 in their inside shops and about 1,000 in contractor's shops. It is expected that the hours will be fixed at 50 a week, and an increase of 12 per cent granted. Definite information regarding this agreement can not be given pending its signing, which is expected very soon.

In the branch of the industry engaged in the manufacture of clothing for men there was the same breaking down of the agreements of 1913 that was found in the boys' branch. Again hours were increased and wages reduced. In the summer of 1915 the Amalgamated Clothing Workers called a general strike, which resulted in a new alignment of forces and a new agreement. The American Clothing Manufacturers' Association, an organization of manufacturers that was formed at the time of the 1913 strike to deal with labor problems, signed the agreement with the Amalgamated. This association has 80 members and employs, both directly and through contractors, approximately 25,000 workers, or a little more than half the total workers in this branch of the industry. The vast bulk of these workers are in contract shops, the manufacturers employing directly only the cutters and trimmers. Most manufacturers, though not all, maintain relatively small establishments. In these the cloth and trimmings are cut and assembled. The work is then given out to other factories to be made at a price agreed upon by the manufacturer and the contractor. The contractor is virtually a foreman. He has a small shop set up on very small capital, or on money lent by the manufacturer. He takes work on a very small margin of profit, employs the necessary help, and personally supervises the making. His methods are usually inefficient, so that his only chance of increasing his profits is by taking it out of the workers. This method of manufacturing by letting out a large part of the work of making to contractors is characteristic of the industry, and gives rise to one of the greatest obstacles to a successful adjustment of the labor difficulties of the trade.

It is evident that if the workers are to be protected it must be in the contracting shops. But the contractors are, as a whole, irresponsible, and agreements made with them could hardly be enforced. The union, recognizing this, has sought to enforce its conditions in con-

tracting shops through the manufacturers who employ the contractors. The agreement entered into with the American Clothing Manufacturers' Association on July 20, 1915, at the settlement of the strike, recognized this condition, and bound the members of the association to give work to those contractors only who maintained in their shops the standards agreed upon by the association and the union. This agreement provided that the strikers return to work, and that 50 per cent of the reductions in prices made since the settlement of the 1913 strike be restored to all coat and pants workers, and that the total reduction be restored to vest makers. It provided that the principle of the union shop be recognized throughout the industry upon the creation of standards, and that work be given only to the contractors maintaining union shops. The machinery for determining the standards, and the machinery for settling disputes is also provided as follows: A committee of five chosen by both sides with an impartial chairman, and to be known as the "Committee on Standards," to settle the matter of standards; a "Committee on Immediate Action," composed of five representatives chosen by each side with an impartial chairman, to settle all matters in dispute; and a standing subcommittee of the latter composed of one representative of each side and known as the "Committee of Two," which shall try to settle all individual disputes before referring them to the "Committee on Immediate Action." Further, both sides agreed to organize a "Council of Moderators," to be composed of three members selected by the union, three selected by the association, and three chosen by both parties from the public at large. This council was to consider all matters affecting the industry as a whole. Strikes and lockouts were prohibited pending the adjustment of disputes.

The agreement was apparently entered into in good faith by both sides. The committees were chosen, but little was accomplished except by the Committee of Two. The Committee on Standards failed to accomplish its object, and little or nothing has come up before the other committees. The Committee of Two, however, which is made up of the managing director of the American Clothing Manufacturers' Association and the chairman of the New York Joint Board of the Amalgamated Clothing Workers of America, has been able to settle all disputes that have arisen. The agreement was to be in force until November 1, 1916, at least. It has not yet been renewed, but the machinery established by it has been continued, and disputes that have arisen since then have been settled by the Committee of Two as under the agreement. It is estimated that about 250 disputes arise and are settled each week.

A new agreement between the American Association and the Amalgamated has been drawn up and ready for signing for some

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few months. Its provisions are generally being lived up to, but the actual affixing of signatures has been put off time and again. The manufacturers' association is willing and anxious to sign it, but the union is disposed to delay. This attitude on the part of the union can be explained by the abnormal conditions in the industry. As has been said, a readjustment is going on within the industry and employment is plentiful. The supply of workers is short, and wages generally are going up. With such conditions a binding agreement is not as desirable from the workers' point of view as under ordinary conditions. In fact the desire to be free to take advantage of any situation that might arise is quite a natural one, and the union is not likely to hurry to sign the new agreement.

The Amalgamated has an agreement with one concern, employing about 1,500 people, which is also a member of the American Association. The agreement is for the calendar year 1917, and, besides providing for 48 hours and an increase of $1 a week, provides machinery for settling disputes without the aid of the association. Each shop controlled by the company has its shop committee, composed of a representative of the company and one of the workers in the shop. This committee has original jurisdiction in all complaints. In case the shop committee fails to effect a settlement the matter is referred to a board of arbitration, composed of a representative of the company, one of the union, and a third member agreed upon by both. This agreement has worked satisfactorily to both parties. The Amalgamated also has an agreement with one other individual concern employing about 500, but which is not a member of the American Association. This agreement is merely a written statement that the company will arbitrate all disputes, but it provides no machinery.

Looking at the men's clothing industry in New York City as a whole, it is apparent that peaceful relations between employer and employee are being maintained. Slightly more than half of those employed in the industry are working under agreements, written and unwritten, but practically the entire industry is working union hours and receiving approximately the union scale. While the agreements have had some influence in bringing about these conditions, it is more than probable that the abnormal activity caused by the war is mostly responsible for the present conditions. The influx of war orders seems to be the outstanding feature of the industry to-day. It is estimated that 60 per cent of the workers on boys' clothing, 40 per cent of those on men's clothing, and nearly half of those on overalls and shirts are now engaged in making uniforms or some other garment for war use by the Government.

TRADE AGREEMENTS IN THE WOMEN'S CLOTHING INDUSTRIES OF PHILADELPHIA.[1]

BY BORIS EMMET, PH. D.

A study of the present workings of trade agreements in the women's clothing trades of Philadelphia confirms a general statement made in an article which appeared in a previous issue of this REVIEW, dealing with the workings of trade agreements in the women's clothing industries of New York City[2] to the effect that the curtailment of the labor supply of these industries, attributable to the cessation of immigration and the increased demand for needle-trade workers caused by the war, has had a profound influence upon the relative strength of the positions of labor and capital in the driving of wage bargains. In the article mentioned it was pointed out that unlike what happened in the days of unrestricted immigration, the garment manufacturers during their busy seasons no longer enjoy the advantage of a superabundance of labor, accompanied by a cut-throat competition for jobs among the workers. The war demand for needle hands has more than offset the somewhat diminished activity in women's ready-to-wear garment trades caused by war economy and by the increased cost of clothing on account of the dearth of materials and labor.

Conditions similar to those in New York were found prevailing in the city of Philadelphia. The effects of a curtailed supply of labor began to be felt in that city during the busy season of the summer of 1916. Its intensity has greatly increased since our entry into the war, which brought to many of the women's garment manufacturers increasingly numerous contracts for military clothing, such as khaki garments, cotton underwear, mattress bags, etc. The abundance of available work and the consequent shortage of hands during the busy seasons strengthened greatly the bargaining power of labor and weakened the force of resistance of the employers. Trade agreements, which were rather unpopular before, are now favored by them "as the only effective method of putting the demands of labor within the bounds of reason and outside the range of daily demands for a change."

The position of labor has particularly been strengthened in the dress and waist industry, which, aside from enjoying a normally

[1] This article is a preliminary summary of one of the phases of a study on trade agreements to be published by this bureau in the future. A similar article dealing with trade agreements in the women's clothing industries of New York City appeared in the MONTHLY REVIEW of December, 1917.

[2] MONTHLY REVIEW, December, 1917, p. 20.

busy season, is doing a considerable amount of war work.[1] This fact, more, perhaps, than any other, may be stated to account for many of the valuable concessions made by the Dress and Waist Manufacturers' Association of Philadelphia to its organized employees. Special mention is made below of the fact that the agreement in operation in this trade at the present time did not originally provide special privileges to members of the union in either hiring or laying off, but that, as a matter of fact, the agreement resulted in a complete unionization of the association shops. Such a condition, it was stated, came about through an obligation assumed by the employers to compel their employees, under the threat of discharge, if necessary, to keep in good standing with their union.

Different reasons are given by those concerned for this valuable concession to the workers. Union officials give due credit for it to the present management of the manufacturers' association, which, it is said, has a keen insight into labor matters and realizes that no agreement is workable without effective organization, and understands at the same time the futility of expecting union officials to direct effectively the actions of workers not affiliated with their organization. Giving due credit to the employers' association for this farsighted policy, one must keep in mind the fact that by the fall of 1916, when the concession referred to was granted, the position of labor was particularly strong on account of its limited supply caused by the cessation of immigration and the consequent increased demand for needle trade workers.

With our entry into the war the increased demand for needle hand labor in the city of Philadelphia was greatly intensified. It resulted in a movement of garment workers from the less busy branches of the needle trades to those in which, on account of war orders, employment was more plentiful. The great demand for workers ushered in a movement of workers from the cloak and suit industry, in which the manufacturing activity, for reasons stated below, has greatly diminished, to other needle industries such as the dress and waist trades, but particularly to trades engaged in the making of men's clothing.[2]

A similar movement, but flowing in the opposite direction—from the men's needle trades to the women's—exists in some of the other

[1] The dress and waist manufacturers secured contracts for mattress sacks, various kinds of bags, khaki garments, cotton underwear, and, in some instances, for trousers, coats, and overcoats. The subdivision of labor introduced in the manufacture of military clothing as well as the application of new machinery reduced greatly the amount of tailoring skill required and thus enabled dress and waist makers to become tailoring operatives.

[2] It is reported on reliable authority that approximately one-half of all the women's garment workers of Philadelphia are at the present time employed on war work of some sort. Instances are known of cloak makers who have deserted their trade altogether for more remunerative and steady employment in munition factories, which are abundant in this locality.

garment industries of the city. Considerable numbers of men's tailors and clothing workers are finding employment in dress and waist establishments which have taken contracts for military clothing or accessories the manufacture of which requires the services of needle hands.

The sudden movement of workers from trade to trade brought new difficulties to the labor organizations. These were confronted with the necessity of formulating a definite policy with reference to the treatment of members leaving the jurisdiction of their respective organizations. Trade-unions with original jurisdiction in the men's clothing trades, as well as those operating in the women's needle trades, were unwilling to give up their claims to the membership of those of their members who, temporarily, perhaps, were finding employment in other needle trades.

The flow of workers from one branch of the needle trades to another and from the men's trades to the women's or vice versa has at the present time assumed sufficiently large proportions to warrant the establishment of a special organization of workers on military garments. Such a trade-union has recently been established in the city of Philadelphia. The new organization is under the joint jurisdiction of the International Ladies' Garment Workers' Union and of the Amalgamated Clothing Workers of America, a national union with jurisdiction in the men's clothing industry.

CLOAK AND SUIT INDUSTRY.

Prior to 1913, the workers of the cloak and suit industry of Philadelphia were poorly organized. Collective bargaining, although in existence, was confined to a few small shops and was not very effective. A general strike was called in the industry in July, 1913. The workers demanded recognition of their union, and collective bargaining. This strike lasted for six months, caused great losses to both sides, but failed to achieve its purposes. It was officially called off on December 16, 1913. This prolonged and bitter struggle resulted in a great disorganization of the cloak industry and entailed the loss of trade orders which have never come back to the Philadelphia market.

Another general strike was about to be called the following September, but was prevented by the efforts of the city authorities, who assisted the parties in reaching an understanding. The terms of the final settlement were drawn up by a board of arbitration agreed to by both sides.

As a result of this settlement two separate trade agreements were signed. One of these was with the Women's Wear Manufacturers' Association of Philadelphia, an employers' association with a mem-

bership of about 40 small employers. The other agreement was signed with the Women's Garment Manufacturers' Association of Philadelphia, which had a membership of about 60, included in which were the largest employers in the trade. In both of these agreements the workers were represented by the Joint Board of Cloak and Skirt Makers' Unions, consisting of representatives of Locals Nos. 2, 53, and 69, and of the International Ladies' Garment Workers' Union.

The agreements were essentially the same. Each provided for a 52-hour week, greatly restricted overtime work, specified minimum rates of wages for week and piece workers, outlawed strikes and lockouts, instituted agencies for collective piece-rate making, as well as for the peaceful adjustment of grievances, and obligated each of the parties to assist the other in the maintenance of safe and sanitary workshops. It further specified that during the dull seasons available work was to be distributed equally among all employees, and that members of the union were not to be discriminated against.

The principal point of distinction between the two agreements was as follows: Under the agreement with the first-mentioned association, which consisted of very small employers, the workers did not obligate themselves to work on "unsettled" garments—that is, on garments for the making of which no satisfactory piece rates were arranged. The agreement with the larger employers specified that workers were not to cease working pending the adjustment of piece rates. This point of distinction between the two agreements is important because it indicates the relative strength of the union when confronted with different types of employers. The union was always able to bring the smaller employers to terms without any special concessions. All the intensive and costly industrial struggles of the previous years were carried on principally against the larger employers, who, up to that time, were victorious over the workers. This fact furnishes the reason for the special concession which the union was compelled to grant to them.

The settlement which resulted in the agreements mentioned did not, however, bring about effective collective bargaining in the industry. The agreements did not work. Officials of the union complained of failure on the part of many employers to live up to many of the provisions and of the fact that the employers' associations were not in a position to discipline their members for the violations. It was further said that decisions of the authorities mutually agreed to were not complied with if in favor of the union. Not all the dissatisfaction, however, came from the union side. Employers frequently complained of failure on the part of the union to keep its promise to refrain from striking and of the fact that individual members of the

union seldom heeded the advice of their officers to remain at work pending a peaceful adjustment of differences.

The agreements quietly went out of existence. By 1917 no trade agreements of any sort were in existence between the organized manufacturers and the union. Collective bargaining was confined to a few small establishments, the owners of which did not belong to any of the employers' associations.

In the spring of 1917 the two manufacturers' associations of the industry consolidated into one—the Women's Garment Manufacturers' Association of Philadelphia. Shortly thereafter, during the month of May, officials of this association requested a conference with the union for the purpose of formulating a new agreement. Such an agreement was signed on August 1, for a term of two years, between the Women's Garment Manufacturers' Association of Philadelphia, with a membership of about 30 and total employees of about 2,000, and the Joint Board of Cloak and Skirt Makers' Unions of the city of Philadelphia. The principal features of this agreement are shown in its text, which is reproduced herewith:

Agreement of August 1, 1917.

This agreement made and entered into this first day of August, 1917, by and between the Women's Garment Manufacturers' Association of Philadelphia, hereinafter styled the "Association," and the International Ladies' Garment Workers' Union, and the Joint Board of the Cloak and Skirt Makers' Unions of the city of Philadelphia, composed of Locals Nos. 2, 53, and 69, all collectively designated as the "Union," contracting herein for and in behalf of the said unions and for and in behalf of the members thereof now employed and hereafter to be employed by the members of the Association;

Witnesseth:

Whereas, the Association is composed of a large number of manufacturers engaged in the cloak, suit, and skirt industry in the city of Philadelphia, and the union represents the workers in the said trade, and

Whereas, the parties hereto desire to establish terms and conditions under which members of the union shall work for members of the Association:

Now, therefore, the parties hereto agree as follows:

1. The regular working-day shall consist of forty-nine (49) hours in six (6) week days, divided as follows: On the first five working days of the week the work shall begin at eight (8) o'clock a. m. and continue until twelve (12) m. and from one (1) o'clock p. m. to six (6) o'clock p. m. On Saturdays work shall be done from eight (8) o'clock a. m. until noon.

2. (A) No overtime shall be exacted or permitted between May 15th and July 15th, nor between November 15th and February 1st, nor so long as there are vacant accommodations in the shop for additional workers and competent workers can be promptly obtained.

(B) In the season in which overtime is permitted, such overtime shall not exceed eight (8) hours in any week, nor two (2) hours in any day, and shall be restricted to the first four working days of the week. No overtime shall be allowed on Saturdays, except for the purpose of finishing and completing emergency orders. Abuse of the last-mentioned privilege on the part of the em-

ployer shall be subject to complaint and adjustment in the manner hereinafter set forth.

(C) Week workers shall be paid for overtime at the rate of one and one-half (1½) times the regular weekly wages.

(D) Employees shall not be required to work on New Year's Day, Independence Day, Labor Day, and Christmas, and there shall be no deduction from the pay of week workers for the aforesaid legal holidays. Employees may also refrain from work on the first day of May, but without pay.

3. (A) *Cloak and suit cutters.*—Cloak and suit cutters, competent to lay out, mark, and cut the goods with reasonable speed and economy shall be designated as "full-fledged" cutters, and their minimum wage shall be $27.50 per week. Cutters who are not full-fledged shall be divided into three classes:

Class "A." Those who have worked at the trade not less than three years, and their minimum wage shall be $22.50 per week;

Class "B." Those who have worked at the trade not less than two years, nor more than three years, and their minimum wage shall be $20 per week;

Class "C." Those who have worked at the trade not less than one year, and their minimum wage shall be $15 per week.

(B) All full-fledged cutters having heretofore received a wage of $24 per week, or more, shall be raised up immediately to the minimum scale of $27.50. All full-fledged cutters having heretofore received a wage of $23 per week, or less, shall be raised up immediately to $25 per week. All Class "A," "B," and "C" cutters shall immediately receive an increase of $2 per week over their present wages.

4. *Skirt cutters.*—The minimum wage of full-fledged cutters on skirts shall be $25 per week. Skirt cutters who are not full-fledged shall be divided into two classes:

Class "A." Those who have worked at the trade three years, and their minimum wage shall be $20 per week;

Class "B." Those who have worked at the trade two years, and their minimum wage shall be $18 per week.

All full-fledged cutters having heretofore received a wage of $22 per week, or more, shall immediately be raised up to the minimum scale of $25 per week.

All full-fledged cutters having heretofore received less than $22 per week and all Class "A" and Class "B" cutters, shall immediately receive an increase of $2 per week.

5. *Trimmers.*—Trimmers on cloaks and suits shall be divided into three classes:

Class "A" shall comprise competent trimmers who have worked at the trade not less than three years, and their minimum wage shall be $24 per week;

Class "B" shall comprise those who have worked at the trade two years, and their minimum wage shall be $20 per week.

Class "C" shall comprise those who have worked at the trade one year, and their minimum wage shall be $15 per week.

All Class "A" trimmers shall immediately be raised up to the minimum scale of $24 per week. All Class "B" and Class "C" trimmers shall immediately receive an increase of $2 per week.

An employer employing only one cutter, or one trimmer, shall employ, if available, only the highest-priced man. If he employs two or more cutters or trimmers, then one out of every three or fraction thereof, of cutters or trimmers so employed, may be as to cutters of Classes "A," "B," and "C," and as to trimmers of Classes "B" and "C."

One apprentice who just enters the trade shall be allowed to every five cutters or trimmers.

6. *Sample makers.*—Sample makers on coats shall receive a minimum wage of $23 per week.

Sample makers on skirts shall receive a minimum wage of $20 per week.

Sample coat finishers shall receive a minimum wage of $13 per week.

Button, hook and eye sewers and skirt bottom basters who are employed by the week shall immediately receive an increase of 10 per cent on their present wages.

7. (A) All prices to be paid to pieceworkers shall be agreed upon in advance between the employer and the price committee of the workers in his shop, in the presence of the shop chairman, and shall be adjusted as nearly as possible on the following minimum basis for each hour of continuous work for a worker of average skill:

For operators, 75 cents per hour.
For jacket upper pressers, 70 cents per hour.
For skirt pressers, 65 cents per hour.
For jacket underpressers, 60 cents per hour.
For finishers, 50 cents per hour.

The said hourly base rates shall not be considered either as a minimum or as a maximum but as a basis for settlement of piece prices.

(B) The price committee shall be elected by the employees at a regular shop meeting, if possible, from among workers who have been employed in that shop not less than one month.

(C) If the employer and the price committee fail to agree upon the prices of any garment or garments, then, upon request of either side, price adjusters furnished by both sides shall immediately be called in. Should the price adjusters fail to agree, they shall immediately agree upon an expert, who shall adjust the dispute within 24 hours and whose decision shall be final and binding on both sides.

(D) The workers shall not be required to work on garments on which prices have not been agreed upon in the manner above provided, except on emergency orders and only during the busy season, when the workers shall continue to work on the unsettled numbers until the prices on them will be fixed by the adjusters or price expert. The price adjusters or price expert must fix the prices on such unsettled numbers within 24 hours from the time the garments were put in work.

(E) All wages shall be paid weekly on a fixed day in cash.

8. The association agrees to cooperate in every way with the union in its effort to enforce proper standards of safety and sanitary conditions in the factories and the shops of the cloak and suit industry in the city of Philadelphia under its control.

No work shall be given to employees to be done at home.

9. (A) The association agrees that its members will maintain preferential shops; that is to say, shops in which the standards herein fixed shall be maintained, and wherein preference shall be given to members in good standing of Locals Nos. 2, 53, and 69 of the International Ladies' Garment Workers' Union in the employment of workers.

(B) Whenever there is insufficient work for all the employees of the shop, work shall be distributed as equally as may be feasible among all the employees.

(C) During the slack seasons when there is insufficient work for the usual number of employees, pieceworkers shall not be expected to report before 9 o'clock a. m.

10. (A) The employer shall have the absolute right to discharge any employee at any time during a period of two weeks of the beginning of his em-

ployment for incompetency or misconduct and such discharge shall not be subject to review. The first two weeks of employment shall be considered as a "trial period." After the trial period, no employee shall be discharged for any cause, except incompetency or misconduct, but the employee so discharged shall have the right to a review of the action of the employer as hereinafter provided.

(B) The employer shall be at all times free to select his employees at his discretion, subject to provision 10; in good faith to reorganize his shop whenever in his judgment the conditions of business shall make it desirable for him to do so, and to assign work requiring a superior or special kind of skill to those employees who possess the requisite skill. In any of these events the employee shall have the right to review of the action of the employer in the manner hereinafter provided.

11. (A) All members of the association shall register with the association, and the association shall register with the union, the names and addresses of all outside shops to which they send work.

(B) The association agrees that its members will not send their work, cut or uncut, to outside shops where the standards as herein fixed do not prevail. In case of a dispute between the employer and the union officials as to whether or not the standards herein fixed are maintained in the outside shops where his work is sent, the matter shall be left to the adjustment committee. If the adjustment committee shall decide that the standards have not been maintained, the work shall at once be withdrawn from such shops.

12. No security deposits shall be exacted from the employees, except for machine parts, which deposits shall not exceed $1, and shall be refunded to the employee upon the surrender of said parts. Any other security deposits heretofore exacted shall be returned. No charge shall be made for electric power or for requisites of work.

13. No employee shall be allowed to hire and pay a helper, or helpers, but joint arrangements between the workers are not hereby prohibited, provided that the basis of division of earnings be fixed in advance, and that each of the employees taking part in such arrangement be paid his or her share directly by the employer.

14. No employee shall be required to work on orders placed by firms or shopkeepers whose employees are on strike, and the strike is indorsed by the International Ladies' Garment Workers' Union. The employer shall sell no goods to such firms.

15. The parties hereto agree to establish an adjustment committee, which shall consist of the chief clerk of the association, the chief clerk of the union and an umpire, who is to be selected forthwith by the parties hereto. Whatever compensation may be found proper for the umpire shall be paid jointly by the two organizations. The umpire shall be removed on complaint on either side, and in the event of the failure to agree upon a new umpire within ten days, the umpire shall be selected by the board of arbitration hereinafter provided.

16. Any complaint, either by employer or employee, shall be taken up for adjustment by the shop chairman and the employer, or some person designated by the latter. If they fail to agree, the matter shall at once be submitted for adjustment to the chief clerks of the association and the union. Should the chief clerks fail to agree, the complaint shall immediately be submitted to and adjusted within 48 hours by the chairman of the adjustment committee, whose decision is to be final and binding upon both sides. There shall be no stoppage of work pending such decisions.

17. Employees who have been discharged and have been ordered reinstated by the adjustment committee shall have the question of pay for the time they lost by reason of such discharge decided by said adjustment committee.

18. A permanent board of arbitrators, consisting of three members, one appointed by the association, one by the union, and one by the two parties jointly, the last to represent the general public, shall be promptly selected, to whom an appeal may be taken from the decision of the adjustment committee in all cases where either of the parties believes the matter to be of general importance to the trade. The board of arbitrators shall also have authority to determine all questions arising as to the construction of this agreement. Said board of arbitration shall be subject to be convened at the instance of either party on any matter not touched upon in this agreement, and on any question arising in the future between the association and the union.

19. The findings and determination of the adjustment committee, if not appealed from within five days, and the findings and determination of the board of arbitration, shall be binding upon both parties.

20. During the period of this agreement there shall be for no reason whatsoever any shop strike or general strike, and no individual or general lockout, but all complaints of either party must be adjusted in the manner as herein provided.

21. This agreement shall be in force until July 1, 1919. It is hereby agreed that if at the end of the first year any question on either side should arise that requires adjustment, the same shall be submitted to the board of arbitration for adjudication.

In witness whereof the parties hereto have signed this agreement through their respective officers, duly authorized thereto, the day and year first above written.

The agreement provides for a 49-hour week, restricts greatly overtime work, specifies minimum weekly and hourly rates of wages, defines the methods to be pursued in the determination of piece rates, outlaws strikes and lockouts, and creates elaborate agencies for the peaceful adjustment of grievances. It also introduces the principle of equal distribution of work during dull seasons. In addition to the above it accords to members of the union preference in employment and layoffs. Subcontracting of any kind is expressly prohibited. The agreement legalizes outside contracting, provided the labor standards of the outside or contract shops are as fixed in the agreement for the members of the association.

The agreement has now been in operation over four months. It is reported to have worked satisfactorily, considering the present abnormal condition of the cloak and suit industry.[1] All the grievances which have arisen have been peaceably adjusted through the

[1] Cloak and suit manufacturers of Philadelphia complain bitterly of the fact that their trade has rapidly been losing ground since the prolonged strike of 1913. The buyers which were then lost have never returned. Aside from the prolonged strike of 1913, the loss in trade is attributed to the fact that the Pennsylvania Railroad has removed its principal station for trains coming from the West from Broad Street, which is in the heart of the cloak industry, to North Philadelphia, 7 miles away. This change makes it very inconvenient for western buyers going to New York to stop over in Philadelphia to inspect merchandise.

offices of the employers' associations and the union without any recourse to the assistance of a third or outside party.

Collective bargaining in the cloak industry of Philadelphia is not confined to establishments belonging to members of the Women's Garment Manufacturers' Association. In addition to the agreement with the latter association, the union has over 50 agreements with individual establishments on terms very similar to those of the agreement with the employers' association discussed in detail above. The total employees of these 50 establishments is about 1,500.

DRESS AND WAIST INDUSTRY.[1]

The beginning of collective bargaining on a significant scale in the dress and waist industry of Philadelphia dates back to a short general strike which took place in February, 1910. Although resulting in a trade agreement, this strike did not bring about successful collective bargaining.

The settlement of 1910 was effected by a board of arbitration agreed to by both sides. It was then agreed that all of the striking employees were to be taken back without discrimination. Upon return to work the employees of each shop were to select from among themselves a committee of three for the purpose of conferring with the employer regarding wages and hours.

The individual shop committees were to work upon the following basis, which was fixed in advance by the board of arbitration: (1) No charges to be made for power or needles; (2) 52½-hour week; (3) unless especially agreed to by the employees, no work was to be permitted on Saturdays after 1 o'clock; (4) piece rates as well as all other differences were to be settled by a committee representing the employees and the employer. In case of inability to agree, the controversy was to be referred to a committee of two, consisting of a representative of the manufacturers' association and a representative of the union. Disputes as to which the latter two could not agree were to be referred for final adjudication to the board of arbitration. The agreement was to continue in force until May 1, 1911.

As already stated, this agreement did not bring about real collective bargaining. It gradually went out of existence, as neither of the parties, apparently, was sufficiently well organized to bargain successfully.

Beginning December 15, 1915, after a threatened general strike, conferences were held for the purpose of formulating a new agreement. These conferences resulted in the signing of an agreement on

[1] Unlike the dress and waist industry of New York City, which is highly specialized, the dress and waist industry of Philadelphia includes also the production of children's and misses' dresses, silk dresses, and house dresses.

January 19, 1916. The agreement is between the Dress and Waist Manufacturers' Association of Philadelphia and the International Ladies' Garment Workers' Union, representing the dress and waist makers who are organized as its local number 15. It is in operation at the present time and governs the relations of the 135 members of the employers' association, with a total of about 6,000 employees.

The present agreement came about by a decision of a board of arbitration organized by mutual consent of both parties. The three principal demands of the union which were submitted to the board for final adjudication were:

1. The establishment of a minimum scale of wages for all cutters in the industry, as follows: (*a*) Full-fledged cutters who are required to do pattern grading, $27.50 per week; (*b*) full-fledged cutters—those who work at laying, marking, and cutting but do no pattern grading—$25 per week; (*c*) senior assistants—those with two years' experience, but not in the grade of full-fledged cutters—$18 per week; (*d*) junior assistants—cutters in their second year—$12 per week.

2. Week workers other than those mentioned to receive increases in wages as follows: (*a*) Such as have received no increase since January 20, 1916, $2 per week; (*b*) such as have received an increase of $1 or more since January 20, 1916, $1 per week.

3. An increase of 15 per cent on all piece rates.

The first and second requests were denied by the board because it "was not in possession of sufficiently accurate information upon which to base a finding as to the reasonableness or unreasonableness of the requests." In this connection the board advised the creation of a wage board to investigate existing wage rates in the trade. This board was instructed to determine rates of wages for each of the occupations and to submit the findings to the board of arbitration for approval not later than September 1, 1917. To afford immediate relief to the workers the board of arbitration awarded a 10 per cent increase to all week workers, with the proviso that in no instance shall this increase be less than $1 per week.

The third request was also denied by the board, because it was of the opinion "that the remedy lies in the hands of the pieceworkers, who, under the provisions of a previous decision of the board dealing with the creation of price committees and official adjusters, were empowered to settle any differences which might arise regarding piece prices." The board suggested that in the making of piece rates "all concerned should take into consideration the present high cost of living."

Unlike the majority of the trade agreements in existence at the present time in many of the other needle trades, the greater part

of this agreement is based upon understandings between the parties, seldom committed to writing. The written part of the agreement relates wholly to demands upon the disposition of which the parties themselves could not agree and which therefore had to be made by the board of arbitration. The findings of the latter are, as a rule, in writing.

The present agreement, as it actually stands, contains the following features: (1) Prohibition of strikes and lockouts; (2) agencies for the peaceable adjustment of grievances; (3) minimum weekly rates of wages for week and piece workers; (4) definite union recognition.

It is understood that the employees will refrain from striking, and that employers will not lock out their employees. All grievances arising are to be adjusted, in the first instance, by the shop chairman, who is the officially elected representative of the workers on the premises, and the employer, and, if these two can not agree, by a committee of two consisting of one representative of the union and one of the employers' association. Cases upon the disposition of which the latter two can not agree are to be submitted for final adjustment to the board of arbitration.

The agreement as originally signed in 1916 provided for specific rates of wages and weekly hours of labor and for a board of arbitration to adjust any differences which might arise. No special recognition or privileges were to be accorded to members of the union, the employers retaining their right to hire and fire at pleasure. As a matter of fact, however, the great majority of association establishments are at the present time completely unionized—that is, employ none but members of the union. This condition came about in the following manner: On August 21, 1916, the union presented certain demands to the employers, among which were: (1) The election by employees of each establishment of a chairman to represent them and their organization; (2) nonacceptance into the manufacturers' association of applicants without an investigation as to whether or not the applicant maintains agreement conditions in his shop; (3) delinquent union members in employ of members of the association to be compelled by their employers to keep in good standing with their organization.

The first two demands were immediately granted. At a subsequent joint conference, held September 7, 1916, the third was acceded to. The association passed a resolution to the effect that any of its members who fail to comply with the new obligation are to be subject to discipline upon reports received from the union. The new obligation virtually means that employers are to discharge union employees who fail to pay their dues, and that any employee having once joined the union must remain in it in order to hold his or her position.

The agreement is reported to have worked satisfactorily until war work appeared in the industry. This began about August, 1917, and has gradually extended until at the present time as many as one-half of the dress and waist makers of the city are employed on war work.

With the appearance of war work the number of shop stoppages increased greatly. The following appear to be the two principal reasons for the more frequent stoppages: (1) Some employers are inclined to deal arbitrarily with their employees because they work on "Government orders." Such employers usually claim that the jurisdiction of the union does not extend to war work, and, "even if it did, it is illegal for the workers to strike." Such assertions on the part of employers immediately result in stoppages to enforce demands for union recognition; (2) Many of the workers are socialists and pacifists, strike the more readily, because by striking they think they can help themselves, harm the "capitalist class," and hinder the carrying on of the war.

Collective bargaining in this industry is not confined to establishments owned or controlled by members of the Dress and Waist Manufacturers' Association. In addition to the agreement with the latter, the union has at the present time individual establishment agreements with about 40 employers, with terms very similar to those of the agreement with the manufacturers' association. These establishments employ about one thousand workers.

FIFTH ANNUAL REPORT OF THE SECRETARY OF LABOR.[1]

While the general policies of the Department of Labor have continued to be the same, the Secretary of Labor states in his fifth annual report, the war has brought new and perplexing problems. It continues to be the purpose of the department to promote the welfare of wage earners and to advance their opportunities for employment; it aims to represent the interests of both organized and unorganized labor; and strives to do so in harmony with the welfare of all industrial classes so as to secure the largest measure of industrial justice.

The war has strained the relations between employers and employees; yet it is true that "in diminishing numbers and with lessening influence as war conditions have developed" employers have opposed the right of wage earners to organize. The Secretary characterizes as unpatriotic the attempt to obstruct arbitrarily labor organization of the conservative as distinguished from the revolutionary type. Making the joining of a labor organization a cause for dismissal from employment—because it is really designed to prevent organization— tends to remove the workers from "the pacifying influences of constructive and responsible labor organization" and to bring them under the influence of the revolutionary type of organization. The Secretary deprecates this fact, declaring that—

> It is the policy of this department to acknowledge the right of both employers and wage earners to organize, but to use its influence against abuse of organization on either side. This policy has been justified by the experience of the mediation service of the department, described in earlier pages of this report. Whenever employers enter into negotiations with organized workers, differences are almost always adjusted satisfactorily. Although both sides have at times made demands which, in view of the war, are unreasonable, nevertheless reasonable settlements have been made when both have come together in a patriotic spirit. In justice it should be added that since the war began the department has encountered not more than one or two instances in which a fair adjustment of differences has been prevented by any representative of organized labor.

All proposals, the Secretary continues, to settle labor disputes by coercing wage earners are "both unfair and impracticable;" "they are also widely regarded, and not without reason, as unpatriotic." These remarks refer particularly to proposals for the conscription of industrial labor. A one-sided policy of "conscription of labor

[1] Fifth annual report of the Secretary of Labor, fiscal year ending June 30, 1917. Washington, 1917. 159 pp.

for private profit" public sentiment can not be expected to tolerate; such a policy must be accompanied by the correlative one of conscription of industry, "so as to make such workers not coerced servants of employers, but employees of the Government itself."

There is, however, no reason for apprehending a necessity for labor conscription, the report continues, in order to settle disputes which interfere with a rigorous prosecution of the war:

> By simple and fair systems of collective bargaining between the Government, labor organizations and business organizations, all labor disputes prejudicial to an effective prosecution of the war can be promptly eliminated from war problems.

SETTLEMENT OF LABOR DISPUTES.

The field of the Department of Labor in the settlement of labor disputes includes all lines of industry wherever its services may be requested or be considered of value. It does not take jurisdiction of disputes in transportation lines, except those occurring among clerks, shopmen, and others not directly engaged therein.

The work of the department has greatly expanded since the entry of the United States into the war and the importance of it is thus emphasized by the Secretary:

> The anxiety of the Government, particularly at this time, for a full production from mine, mill, and factory in order that the war progress of the United States and our allies might be unhampered caused the commissioners of conciliation to strain every effort to secure satisfactory adjustments in all labor controversies, with the special purpose of preventing, wherever possible, any stoppage of work and consequent loss to the country in output and to the workers in wages. Vastly increased production has been thus facilitated.
>
> The success which has attended the department's representatives in the great majority of disputes has been most gratifying. In many instances, through the efforts of the department, strikes which would have involved thousands of workers engaged in great operations were quietly averted and industrial peace maintained.

The magnitude of the labor disputes handled during the fiscal year ending June 30, 1917, is indicated by the fact that 473,734 workmen were directly affected and 334,225 indirectly. Increased work since the war declaration of April 6, 1917, is shown by the fact that since the end of the fiscal year to October 25, 1917, the additional number of disputes involved directly almost three-fourths (343,906) as many workmen as were affected during the whole of the fiscal year. The disputes of this latter period involved indirectly 202,578 workmen, or about two-thirds of those indirectly affected by disputes occurring during the whole fiscal year. And of the disputes arising during the fiscal year those occurring during that part of the war period from April 6 to June 30, 1917, affected directly 228,123 workmen, and indirectly 178,376.

The character of the disputes handled by the department from July 1, 1916, to October 25, 1917, is indicated in the statement below:

NATURE OF DISPUTES HANDLED BY DEPARTMENT OF LABOR, JULY 1, 1916, TO OCT. 25, 1917.

Period covered.	Nature of disputes.			
	Strikes.	Lockouts.	Controversies.	Total.
Apr. 6, 1917, to Oct. 25, 1917	281	28	212	521
July 1, 1916, to June 30, 1917	242	13	123	378

Of 378 disputes during the fiscal year under review the department successfully adjusted 248, or 65.6 per cent. It was unable to adjust 47, or 12.4 per cent; while 42, or 11.1 per cent, were pending; and in 41 cases, or 10.8 per cent, the result is not specified.

RESULTS OF EFFORTS AT MEDIATION BY THE CONCILIATORS OF THE DEPARTMENT OF LABOR, JULY 1, 1916, TO OCT. 25, 1917.

Period covered.	Number and per cent of disputes—								Total.
	Adjusted.		Not adjusted.		Pending.		Result not specified.		
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
Apr. 6, 1917, to Oct. 25, 1917	322	61.8	43	8.3	105	20.1	51	9.8	521
July 1, 1916, to June 30, 1917	248	65.6	47	12.4	42	11.1	41	10.8	378

The success of the department's work is looked upon as most gratifying, and attention is called to the growing desire on the part of both employers and employees to secure the good offices of the department.

Labor has discovered that it has a standing in the Government machinery of its country whenever its demands are based on its industrial and constitutional rights. Employers, on the other hand, have found the department a defender against unreasonable exaction.

FEDERAL EMPLOYMENT SERVICE.

To such magnitude has the employment service of the Division of Information, which is a part of the Bureau of Immigration, grown as a result of the war demands that the Secretary urges the creation of a national employment bureau or independent division in the department. A bill is recommended for enactment which provides for a Commissioner of Employment at $5,000 per annum, to be appointed by the Secretary.

The war brought an extraordinary demand for "man power," particularly in all industries supplying war materials. "Much of this,"

the Secretary of Labor says, "was found to have been influenced more by eagerness for labor at low or inadequate wages relatively to the sharp rise in living expenses than by general labor shortage." The problem to be met by the department was less a problem of labor scarcity than of imperfect distribution.

Perhaps the largest service of the department was rendered in connection with recruiting men for the construction work of the Shipping Board. Within 10 days of the call from the board a list of approximately 19,000 skilled mechanics ready for service was secured by the department. Calls for labor in the construction of the Army cantonments have also been responded to by the department.

In furtherance of its war employment service the department created, on June 14, 1917, the United States Public Service Reserve. This is a registration agency for patriotic citizens who desire to offer their services either with or without compensation to the Government or to enterprises engaged on Government work.

The Boys' Working Reserve was organized April 20, 1917, for registration of boys over 16 years of age who may wish to do service in employments depleted of adult workers by war necessities. The organization, which is much decentralized and dependent upon the personal initiative and abilities of the State directors cooperating with the central director at the department, has placed over 150,000 boys upon farms for seasonal work—"boys from city life who otherwise would not have been able to render this national service."

A service similar to those above has also been established for the benefit of woman workers.

To assist the department in its employment service for the current year an emergency appropriation of $250,000 ($750,000 asked) was granted by Congress October 6, 1917.

The extent of the work of this Federal employment service may be seen from the subjoined table for the years in which it has been in operation. The extraordinary increase for the fiscal year 1917 is quite apparent.

WORK OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, OF THE DEPARTMENT OF LABOR, FOR THE FISCAL YEARS 1908 TO 1917.

Fiscal year.	Applications for work.	Number referred to employment.	Number actually employed.	Fiscal year.	Applications for work.	Number referred to employment.	Number actually employed.
1908 and 1909	.....	.....	5,008	1914	19,393	.....	3,368
1909	26,477	.....	.....	1915	90,119	[1] 8,883	11,871
1910	18,239	.....	4,283	1916	184,032	84,963	75,156
1911	30,657	.....	5,176	1917	413,649	363,189	283,799
1912	26,213	.....	5,807				
1913	19,891	.....	5,025	Total	828,670	457,035	399,493

[1] For months of May and June only.

IMMIGRATION.

The administration of the immigration and Chinese exclusion acts rests with the Department of Labor exclusively. During the fiscal year 362,877 aliens were admitted to the United States and 16,028 excluded. Of this number 295,403 were immigrant aliens and 67,474 nonimmigrant. The number of immigrant aliens admitted during the fiscal year 1916 was 298,826, making an immigrant decrease of 3,423. Subtracting the number of alien departures, the net increase in alien population in 1917 has been 216,498.

THE CHILD-LABOR LAW.

While the Department of Labor is primarily engaged in the enforcement of the Federal child labor act, the Departments of Justice and Commerce cooperate also in its enforcement. The immediate enforcement of the law is delegated to the Child Labor Division of the Children's Bureau in the Department of Labor. As the law became effective January 4, 1917, the principal work in its enforcement during the year has consisted in the formulation of regulations for carrying out its provisions. In the issue of certificates of age, particularly, close cooperation has been established with State officials engaged in enforcing the child labor laws of those States.

As the result of its study on the child-labor situation in connection with the law, the bureau called the attention of the Secretary of War to the employment of children on a Government reservation. The Secretary of War subsequently issued regulations concerning the future employment of children on such reservations, regulations which conform to the standards laid down in the child-labor act itself.

Aside from the administration of the child-labor law the principal work of the Children's Bureau is investigative. Special studies of child welfare abroad have been made by the bureau. These include matters of child labor, dependency, delinquency, illegitimacy, provisions for soldiers' families, maternal and infant care.

The bureau has combined the results of its eight completed field studies on infant mortality and finds "an even steadier decrease in the death rate among babies under one year of age as the income of the father increases" than did the figures for the Manchester (N. H.) study published during the year.

WOMAN LABOR.

The war early emphasized the importance of woman labor for the war industries. A central employing agency, created by private enterprises at first, was turned over to the Department of Labor just before our declaration of war. The work has consisted of (1)

the assortment and collation of data on war contracts involving woman labor; (2) sending contracts exclusively to agents of the United States Employment Service; (3) collection of information as to requests for woman labor in war industries; (4) determination of the legitimacy of such requests; (5) exclusive initiation in recruiting the labor of women. Cooperation, however, is invited from State, municipal, and private agencies.

FARM LABOR.

The Department of Agriculture assumed the task of studying the supplies and needs of farm labor in rural districts, while the Department of Labor cooperated to study the available supplies in towns and cities and to direct these through their employment agencies to places of need. The Department of Labor continued to maintain Kansas City as its center of harvest land operations, and kept in close touch with the National Farm Labor Exchange. The department extended its activities by aiding in placing men for the Canadian harvests.

Closely related to the farm labor shortage is the recommendation of the Secretary of Labor for the creation of agricultural colonies and Government lands under governmental supervision. These colonies are designed to attract labor from urban centers, young farmers just getting a start and others interested. The colonists should be given some limited form of title, "without investing them with absolute tenure rights, useless to them but attractive to speculators." A system of cooperative credits is suggested. For the purpose in question a measure similar to the Crosser colonization bill now pending "seems well adapted in principle and easily adaptable in terms."

NEGRO LABOR.

"With the coming on of war, a stream of negro migration from the South," the Secretary of Labor notes, "caused much concern with reference to planting, and harvesting the crops of that region." Inducements were held out in the North principally by railroad corporations desiring to make up for the loss of unskilled immigrant labor. Group migration, at first assisted by the department, was abandoned on the discovery of these circumstances, but assistance in finding employment was continued for individuals, regardless of race.

The department has under way an investigation of the causes and conditions surrounding this migration because it considers the problem an important one, characterizing it as "an acute labor phase of the war problem."

Preliminary reports from those in charge of the investigation in the South show "that on its economic side there necessarily must be some increase of wages, and on farms and plantations, better understanding and accounting between landlord and tenant, better housing and gardening, and more intelligent adjustment to crop rotation, and to necessary changes in methods of agriculture," in order to prevent a further labor shortage in the South.

CIVIL AND MILITARY SERVICE.

The department cooperated with the Civil Service Commission in employment work, assisting in finding men for the navy yards, arsenals, and other Government establishments; the officers of the department in some districts sit with the examining board of the commission or carry out the work where the commission has no representatives.

The work that the department can do at the close of this war is forecast in its efforts in the placing of national guardsmen after their return from the Mexican border. The department estimates that it placed 15,577 guardsmen in employment out of a total of 50,000 who returned from the border during February and March of 1917.

For the general civil service the Secretary renews his recommendation of the previous year for an equitable system of retirement, "one that will best subserve the interests of efficiency and economy and at the same time insure fair financial provision for the old age of Government employees who by long and faithful service have deserved this consideration."

BUREAU OF LABOR STATISTICS.

The Bureau of Labor Statistics, together with the Children's Bureau, are the investigative branches of the department. The investigations of the latter have been adverted to already. Special studies with reference to the war have been undertaken by the Bureau of Labor Statistics; these have included wage and price studies in communities affected by the expansion in industry, types of collective bargaining, industrial hazards from accident and disease, and the employment of women in men's occupations. The bureau has also published bulletins and articles of British, French, and other foreign official reports, on hours, fatigue, health, welfare work, the employment of women and juveniles, labor unrest, and other matters concerning conditions of labor in those countries.

COORDINATION OF DEPARTMENTAL FUNCTIONS.

In a communication which was submitted to the Speaker of the House on January 9, 1917, and which the Secretary incorporates at

length in his annual report, attention is called to the fact that certain bureaus in other departments of the Government are engaged in work properly belonging in the Department of Labor. The field of the Public Health Service, for instance, overlaps that of the Bureau of Labor Statistics in the investigation of occupational diseases; the employment work of the Bureau of Navigation in the Department of Commerce—hiring and discharging of seamen—is logically within the purview of the Department of Labor; and the licensing of officers of vessels and the administration of the safety laws applying to vessels and their crews—now functions of the Department of Commerce (Steamboat-Inspection Service)—so far as this latter function relates to the personnel of the vessel, belong, naturally, to the Department of Labor. To avoid this duplication of effort legislation is needed, and the passage of such a measure is earnestly recommended.

LABOR AND THE WAR.

THE SOLDIER, THE WORKER, AND THE LAND'S RESOURCES.[1]

BY BENTON MACKAYE.

The United States to-day, in common with the other belligerent nations, has before it the question of providing for the returning soldier and for the worker who has been dislocated in his occupation by the war. The dislocated must be relocated. For those who are going to be able to use it, land will be, as always, the fundamental opportunity. The other belligerent nations, notably Great Britain and her colonies, are making extensive plans for public colonization. Our neighbor Canada is working on Crown-land legislation which is perhaps more advanced even than that of Australia, and the actual location of returning soldiers has begun on lands in Ontario and in Manitoba.

This same problem was before this country 50 years ago. The question then was, How can the public domain be utilized for the benefit of the Civil War soldier? The so-called solution was to pass a law providing for soldier's additional homestead land. By the terms of the homestead law, passed in 1862, any citizen of the United States could obtain free of charge 160 acres of public land after residing thereon for five years and making certain improvements. But under the soldier's additional law, passed in 1872, any Civil War veteran who had already obtained a homestead of less than 160 acres could get, without the need of residence or improvement, the additional land needed to make 160 acres. Every such veteran could get a paper certificate whereby the acreage to which he was entitled could be secured. This certificate became known as scrip, which was a document enabling the holder to select and obtain from the Government the immediate and unconditional title to a given acreage anywhere upon the public domain. Since this form of scrip amounted to a free and transferable ticket to a piece of public land at no definite location it became subject to grave abuses by land and town-site speculators.

It does not seem probable that the device of soldier's scrip will be tried again. It belongs with the old order of land legislation which

[1] This article is a summary of a forthcoming report on the subject of land colonization.

resulted in the disintegration of most of the public domain. Since Civil War days, however, a new order has come about.

A NEW ORDER IN GOVERNMENT LAND POLICY.

Disintegration is gradually being replaced by integration of the Nation's sources of life. The establishment since 1891 of over 130 million acres of National Forest land in the West is one prime move in the new process of national integration. The purchase by the Government since 1911 of nearly 1,000,000 acres of forest lands in the Appalachian and White Mountains of the East is a sharp reversal of the former policy of public land disposal. And again the leasing system established in 1914 for coal lands in Alaska, together with the reservation of a portion thereof for Government purposes, extends to another great resource, the application of the conservation policy adopted for the remaining forest resources.

The growing policy of integration, moreover, shows itself in other ways than in the retention and the acquisition of public resources. In the development of resources, the Government has become active where it used to be passive. The reclamation law, passed 15 years ago, marks the new policy as it applies to the vast areas of desert lands in the West. The Alaskan railroad, begun in 1914, is second to the Panama Canal in the Government's major transportation projects. The proposal to conduct timber operations by the Government in getting out spruce for airplanes contemplates extending still further the field of public action.

And with the birth five years ago of the Department of Labor, the workers' point of view has been definitely brought into play with regard to the Government's part in the country's development. From whatever other angle they may be viewed, the land and resources of the country are to-day looked upon by the Government as an opportunity for the Nation's workers. This policy was rendered strikingly articulate by the present Secretary of Labor in 1915, when he said, in his annual report for that year, that "the labor-distribution work of this department should extend to some such development of the natural resources of this county as will tend to make opportunities for workers greater than demands for work."

In view, then, of present public policies in land development, the problem that now faces the country of relocating the soldier and worker requires a substitute for the old method of soldier's scrip. And it is the peculiar province of the Department of Labor to make tangible suggestions as to this substitute. Accordingly this department will soon publish a preliminary report on this subject based on the investigation referred to in the footnote at the beginning of this article.

A HUNDRED MILLION ACRES OF IDLE AGRICULTURAL LANDS.

This investigation shows that the idle lands in the United States—cut-over lands, swamp lands, and arid lands—capable of reclamation through stump clearing, drainage, and irrigation, cover approximately 100,000,000 acres. The cut-over or logged-off lands are located for the most part in the big valleys of the forested sections of the Pacific Northwest and the Rocky Mountain region, in the northern Lake States (Minnesota, Wisconsin, and upper Michigan), and in the southern coastal region from Virginia to Texas. The undeveloped swamp lands lie chiefly in Florida, in the Mississippi delta, along the Atlantic and Gulf coasts, and in northern Minnesota. The remaining arid but irrigable lands lie mostly in the valleys of the Colorado Basin and elsewhere through the western States.

Large areas of the arid lands are still in the public domain; large portions of the swamp lands in Florida and in Minnesota are still in State ownership; but by far the greater portion of the logged-off land is under private ownership: The present methods of developing these lands are inefficient with respect alike to the settler, the bona-fide investor, and the Nation at large. Especially is this so as regards the logged-off lands.

In spite of the good progress which has been made, from a mechanical standpoint, in devising means for pulling and piling stumps, the financial management, taken as a whole, of stump-land development is such as to deprive the settler with small means of taking advantage of any efficient methods of land clearing. The average settler by means of very severe work makes an existence, but little more. Many of them give up the combined fight against nature and finance and return to the shops and the mines, where their wage, however small, is at least a known quantity. The handling of lands is on a semigambling basis. There may be a huge profit derived by the landowner or selling agent, or there may be a loss. Often the agents and subagents obtain the lion's share of whatever money is to be made. At the present rate of clearing it will take more than a century to reclaim the country's logged-off lands.

TIMBER CULTURE VERSUS "TIMBER MINING."

There are in the United States about 450,000,000 acres which are more suitable for growing wood and timber than for any other purposes. Of this area 150,000,000 acres occur in the mountain regions of the far west; the remaining acreage occurs in the mountainous and other portions of the eastern States. Most of the eastern forests have been cut over and more or less depleted, while large parts of the western forests yet remain in virgin condition. Almost all of the eastern forests are in private ownership, whereas two-thirds of the

western forest area is owned by the Government in national forests. The seat of the lumber industry has been moving across the continent during the last 75 years. In 1850 and up to 1870 the largest proportion of the Nation's cut of timber came from the northeastern States; by 1890 the main share was coming from the Lake States; to-day it is coming from the Gulf States; and in the near future the final seat of the industry as now conducted will be in the Pacific Northwest.

The lumbering process which is thus passing in a series of waves over the country has had but one chief object—to shovel out the timber. Timber culture on any appreciable scale has not been practiced. The industry is one of "timber mining." One valley after another has been cut off and left empty—one region after another has been largely depleted of its forest stock. Only a small portion of the young stock which should be growing, is actually coming up. The effect of this condition on the future supply of wood is obvious, and has been many times pointed out. Its effect upon social and labor conditions is equally demoralizing. The "timber-mining" industry is essentially migratory, hence employment therein is essentially unstable. The lumber jack must live in a camp, and the man with a family is excluded as a worker. "Timber mining" being itself a tramp industry, it is a breeder of tramps; it is an industry of homeless men.

According to estimates made by the California Commission of Immigration and Housing there were in 1915 living in the labor camps of that State 75,000 persons exclusive of farm laborers. On this basis the Bureau of Labor Statistics estimates that there are at least 100,000 workers in the various kinds of labor camps—logging, mining, and other camps—in the three Pacific States alone.[1]

Under present methods of handling, the undeveloped resources of this country—agricultural, forest, or other resources—offer to the returning soldier or worker no opportunity of real value to him. Under proper methods of management, however, these resources offer vast opportunities. Leaving out the possibilities under proper management of permanent employment on forest lands, leaving out the opportunities on semiwild grazing lands, and leaving out the whole of Alaska, the population which can be cared for on the hundred million acres of logged-off, swamp, and arid lands is greater than that of New England.

What can be done to develop these potential opportunities into actualities? A few suggestions, in line with present day Government policies, are made in the following paragraphs as to the course of this development.

[1] Labor laws and their administration in the Pacific States, by Hugh S. Hanna. Bul. 211, U. S. Bureau of Labor Statistics, p. 15.

A POSSIBLE POLICY FOR AGRICULTURAL LANDS.

In the first place no sweeping rule can be laid down for arriving at proper methods of managing our natural resources except to say that the utmost friendly cooperation is required between the Federal Government, the States, the landowners, and the labor interests involved. The problem of land management is too complex, both from physical and legal standpoints, to be subject to universal rules.

The most promising field perhaps for the right kind of colonization of wild lands exists in the mountainous regions of the Northwestern States. The natural unit of development here, from a physical standpoint, is the mountain basin. Usually the level meadow land in the bottom valleys is chiefly valuable for farming, while the slopes, more or less forested, are chiefly valuable for growing timber. A certain amount of grazing land occurs among the timbered areas. Most of the area on the mountain slopes is now Government land in national forests, while nearly all of the bottom land has been cut up into private holdings. Part of this bottom land, in the localities of the national forests, has been developed for farming, but large areas yet remain under timber or in stumps.

Even on the bottom lands all of the area is by no means most suitable for farming. The soil itself may not be fertile or the cost of stump disposal may be prohibitive. No land should be used for farming of which the average yearly return will not be at least sufficient to pay, in addition to reclamation costs, a normal wage for normal labor. But land not adapted to profitable farming is usually suitable for growing timber. It is estimated that only 4 per cent of national forest land will ever be suitable for farming.

With areas found by the above test to be potential agricultural land, the Federal Government might offer to the respective States and landowners involved, its services for reclamation. Improvement districts could be established covering definite portions of certain valleys. Within each district the Government could, by contract or otherwise, conduct large-scale stump-pulling operations, the cost of which could be charged against the land cleared. Through the use of Government credit the interest could be kept very low and the clearing charges extended, on the amortization plan, over many years. The Government could also, through its Employment Service, provide for locating settlers upon the land reclaimed.

But the Government should not offer to aid in these ways until the State and the landowners involved make provision in specific ways that land speculation shall be eliminated from the district to be improved, and that the settlers therein shall be charged in such manner for the use of land as to insure them normal wages and security in their homes.

In this way the Government would reclaim and colonize the land for the owners, provided only that the settler when he arrives, and at all times, gets in specific ways a square deal. The settler, whether returned soldier or other worker, needs something beside mere acreage in order to make a decent living. The old method of turning over to the homesteader 160 acres in the wilderness, and then leaving him, as if he were Robinson Crusoe, to work out his fate single handed, belongs, for the most part, to the past. It is a policy to be put upon the scrap heap along with the policy of soldier's scrip, of which it is a part.

The prospective farm could be cleared of stumps or other impediment; it could be equipped with house and barn; it could be made accessible to market by good roads. The settler himself should have every chance to cooperate with his neighbors in selling his produce and in buying his supplies. The farms could be made ready for immediate use, and the cooperative equipment prepared in advance. Men can not live by land alone except by returning to a form of savagery. If the agricultural worker deserves an even chance with the manufacturing worker, then the farm as well as the factory must be fully equipped before, not after, operations begin.

The policy here outlined applies to more than the logged-off lands of the western mountain valleys. Townships and tracts of land can be organized into improvement districts in other parts of the country. The cut-over lands in the northern Lake States, in the southern Atlantic and in the Gulf States, can be reclaimed from stumps and left-over timber under the same policy. The swamp lands in these same regions can likewise be reclaimed, as well as the remaining arid lands of the West. In all these regions there are vast values to be created. The Government can well follow up its present reclamation policies by taking the initiative in creating these values. In so doing, however, clean-cut measures must be taken to see that values thus made go where they belong: to the settler and worker in the equivalent of fair wages, to the legitimate investor in a fair return, to the local community in sufficient taxes, but not to the speculator in unearned profits.

A POSSIBLE POLICY FOR FOREST LANDS.

But undeveloped land in the United States offers to the returning soldier and the worker an opportunity in other ways than for agricultural use. Under proper management it offers an opportunity for permanent employment in the forest industry. From a physical standpoint there is no reason whatsoever why the forested valleys and slopes of the western mountains, where the principal future supply of timber now remains, can not be handled so as

to insure within each locality a continuous yield of timber, and continuous employment in the sawmill and woods. Many localities within the national forests offer such opportunities.

A typical drainage basin in the western national forests may be assumed to contain 100,000 acres of productive forest land. Suppose a series of operations are planned whereby the mature timber on this tract is to be cut off in 50 years. If the right methods of cutting are used, by the end of this 50-year period the younger trees will have grown so that the tract will be ready to be cut over again. In this way the tract can be kept continuously productive for all time. Suppose the permanent annual yield from this tract is 20,000,000 board feet. This yield would provide continuous employment for more than 150 men, who with their families would make a population of about 800. About half the men would be employed in the sawmill and half in the chopping operations. The sawmill located perhaps at the entrance of the valley would support a permanent community of about 400 people. The logging operations in the woods would support another permanent community of 400. This community would have to be relocated from time to time as different portions of the tract were being operated. But since the employment would be continuous the forest workers could at all times live in their homes with their families and maintain a community life.

Measures should be taken to see that the populations supported by the sawmill and the forest operations would develop into real communities and not mere shack towns. Aside from the maintenance of proper housing and living conditions, there are two or three fundamental community standards. These include provision for voting and self-government, for schools, churches, and educational facilities, and for cooperation among the workers to secure their economic and social welfare.

Permanent forest communities based upon continuous forest employment would make of the forest worker a family man instead of a hobo. Those determined to be hoboes would be eliminated, but those who wanted settled employment could have it. With such a system in vogue many of the labor difficulties in the lumber industry would be ended. And such difficulties can not be settled by model camps, for a camp, however model, is no substitute for home.

The system of forestry and continuous forest employment outlined above could readily be installed on certain of the national forests to provide for present and permanent needs of the Government for timber. Such operations could be carried on either by the Government directly or through the method of timber sales. The Government has been considering the advisability of taking part in timber operations in the Pacific Northwest, private corporations hav-

ing been unable to get Sitka spruce for Army airplane stock in the quantities required. In many cases, private holdings of timber land are included within national forest boundaries. These holdings might be purchased by the Government, though perhaps a more practicable method would be to adopt some cooperative arrangement with the owners whereby they would receive each year a part of the net returns from the whole operation, such part being in proportion to the amount of the timber owned by them as compared with the total amount of timber on the tract.

OPPORTUNITIES FOR WORKERS IN THE DEVELOPMENT OF COAL LANDS.

The natural resources of the United States offer still further opportunities for the returning soldier and the worker. There are many million acres of grazing lands throughout the western States which can be utilized for their benefit. There are also extensive areas of coal lands.

A big undeveloped coal field lies in the San Juan Valley, in northern New Mexico and southern Colorado. A proposition has already been before Congress to build a Government railroad to tap this region. But the most extensive coal fields yet undeveloped, within the jurisdiction of the United States, are in Alaska. The Matanuska coal lands in that Territory are to be opened under a leasing system, though a large portion of them is to be retained for exclusive Government utilization. In its handling of the operations in these coal fields the Government has a chance to set a standard for proper labor conditions in the mining industry.

The Government railroad in Alaska, in addition to tapping the Matanuska coal fields, will open up vast areas now inaccessible. It is estimated that Alaska contains, in its valleys which lie between the ice-covered mountains, about 65 million acres of potential agricultural land now covered by a meager growth of timber. The projected lines of Government railways are going to penetrate, in Alaska, the last American frontier. In view of the combination of mineral, forest, and agricultural resources to be opened in that vast country, nearly all of which is still public land, Alaska should present one of the most promising areas now left on the globe for those seeking a new start in life. Another Scandinavia here awaits development. The Government railroad is the first big step in this development. If this new country is to be an opportunity for the soldier and the worker, and not for the speculator, a colonization policy, based upon the principles discussed, must be the next step in its development.

The suggestions herein made, so far as they relate to the utilization of farming and forest lands, have been worked out in some detail in

the forthcoming report above referred to. But a substitute for the scrip method of relocating the soldier and worker, on the lines here suggested, will, of course, require legislation by Congress. A national colonization bill has already been introduced in the House by Representative Robert Crosser, of Ohio, and its principles have received the approval of the Secretary of Labor in his recent annual report. Under the provisions of this measure, with slight revision, the suggestions for policy above outlined could be applied.

The Department of Labor in pursuing the investigation here started desires to do its full part in developing a policy which will lead, rather than follow, the other countries of the world in their own advanced policies of utilizing land and resources for the benefit of the returning soldier and the worker. In this big task the fullest possible cooperation is solicited.

SOME CONSIDERATIONS AFFECTING THE REPLACEMENT OF MEN BY WOMEN WORKERS.[1]

BY JOSEPHINE GOLDMARK, PUBLICATION SECRETARY, NATIONAL CONSUMERS' LEAGUE.

Among the many new and urgent problems of industry in wartime, none challenges our best thought more sharply than the replacement of men by women workers. This movement, which has gone far abroad, is still in its infancy in this country; yet it is not too soon, it is indeed high time, to gauge the tendencies and consequences of so radical a change. The replacement of men by women, proceeding in many industries and occupations in every State of the Union, must of necessity react for good or for ill not only upon the girls and women so employed, but upon far wider circles, upon their families, their children, and upon the whole standard of living of their communities.

In this country it is too soon as yet to hazard an estimate of the numbers of women who are entering upon new occupations and taking men's places. The number of the women so employed is not yet numerically great: their employment is in many cases still experimental, but we are undoubtedly on the threshold of great innovations. Girls and women as messengers and elevator operators, as section hands and towermen on railroads, running drills and presses, working in powdermills and sawmills, cleaning the outside of railroad coaches; and wiping engines in the machine shop, in the munitions plant, in the airplane factory—these are some of the new figures in industry.

[1] Read before the section on industrial hygiene of the American Public Health Association, Washington, D. C., Oct. 18, 1917.

BENEFITS OF THE CHANGE.

Among the benefits from the new widening of women's employment one of the most important is the breakdown of prejudices. Women have in the past been hampered in advancing industrially by the prejudices of both employers and their fellow workmen, organized and unorganized. Women's sex and inexperience have been made the excuse not only for all manner of exploitation, but for the refusal of employers to advance them to positions of responsibility and trust. One of the triumphs of women's war-time employment in England has been their response to opportunity—the intelligence and the speed with which they have reacted to instruction in intricate new work, such as the manufacture of aero engines and guns, as well as in the simpler operations of making shells, fuses, hand grenades, etc. This is the universal testimony—to the unbounded surprise of all, women have proved their ability to enter upon and succeed in work hitherto closed to them on the sole ground of their sex.

And this success has been a triumph not only for women workers but for the new methods of instruction in industry. Instead of the old rule of thumb and mere copying of fellow workmen by apprentices and new workers, there has been intelligent direction of the working women newly introduced into the workshops of England. Mr. Granville Baillie, of the British Ministry of Munitions, at a conference on women in industry in London last May, told how the new training had enabled working women to surprise the world by their achievements in industry by the speed, the accuracy, and the responsibility with which they have mastered their new trades. The training has been most successful when carried on in the plant where the women are to work. Under the British Ministry of Munitions, training schools were established with a view to giving untrained women some general technical instruction for the simpler processes in the engineering and chemical trades. This has been best carried out in the individual shop rather than in technical schools "which," says the Health of Munition Workers Committee, "however excellent, can no more replace factory instruction than can drilling in the park, training in the field.

Throughout the world women are entering these new fields. Between July, 1914, and January, 1917, the number of women gainfully employed in Great Britain had increased by almost one-third. According to the British Labor Gazette of August, 1917, 256,000 women are directly replacing men.[1] In Germany the number of women employed in metal trades alone in July, 1916, is reported to have been over 3,000,000. In France the Minister of Munitions

[1] MONTHLY REVIEW of the U. S. Bureau of Labor Statistics, October, 1917, p. 41.

stated just a year ago that 300,000 women had gone into munition works; from Italy it is officially reported that the number of women employed in munition works in Lombardy has risen from over 4 to about 10 per cent of the total number of employees.[1]

Undoubtedly in this country many promising fields are opening for women from which they have been debarred and for which they are well fitted. Such are the new positions in many branches of the railroad service: for instance, as freight checkers, as ticket agents and information clerks, in weeding and clearing the tracks; in banks and financial houses; in cost and production departments; as floorwalkers in stores; as clerks in shoe stores, etc. In machine shops women are found to excel men in inspecting and testing and in other operations requiring dexterity. In many instances, too, women are now receiving far higher wages than ever before for work no harder than women's traditional exhausting labor of scrubbing floors during long hours in dampness and wet. Yet, granting all that promises from such gains, no one can view without alarm the indiscriminate employment of women which is in process or impending in such heavy work as glassmaking, in some of the processes of steel mills exposed to extreme heat, as ballast tampers or freight handlers on railroads, as pilers of lumber and loaders of scrap iron, or in the bleachery pits of cotton mills, to mention some of the occupations most needing scrutiny and care.

EVILS NEEDING SCRUTINY.

If the achievements of women workers challenge the world's admiration, we can not neglect the obverse side of the picture. We have not yet learned the cost, the wastage of woman power.[2] There is no doubt that both abroad and in this country unmistakable dangers are inherent in many of the new occupations. Some, indeed, are totally unfit for women; some may be rendered fit by changes in method of management; in all of them the indispensable prerequisite is a new scrutiny of the workers and the effect of the work, a kind of intelligent supervision known hitherto in only a very small number of the most enlightened establishments but needed now wherever women are employed in new lines of activity if we are to preserve our national energies.

LIFTING EXCESSIVE WEIGHTS.

Of the specific dangers to be guarded against one of the most obvious is the lifting of excessive weights. This has long been recog-

[1] Child Labor in Warring Countries: A brief review of foreign reports. The Children's Bureau, U. S. Department of Labor. Industrial Series No. 4, pp. 12, 13, 14.

[2] See Women's Industrial News. London. July, 1917.

nized as a source of injury for women. In no occupation hitherto engaged in have the chances of physical harm from lifting excessive weights been greater than, for instance, in the proposed employment of women in railroad freight yards. One road which has contemplated such a step stated that the weight of goods to be lifted would run up to 100 pounds. No argument is needed to show that such work, continued through the day, is unfit for women and should be totally prohibited. It is true that in laundries, another traditional employment of women, women are expected to lift bundles often weighing more than 100 pounds. This is undoubtedly a source of physical injury; in freight yards such burdens are not an occasional part of the work but constitute its main part. In one railroad yard girls themselves weighing not more than 115 pounds were found wheeling metal castings in wheelbarrows up and down inclined planks and loading them into the cars.

A recent report from Germany shows that among women employed in the metal trades heavy lifting is a main cause of physical injury. The inquiry covered over 2,500 establishments employing more than 266,000 women and girls, an increase of 319 per cent over the number employed before the war. Projectiles weighing from 22 pounds to 82 pounds have to be raised breast high from the floor and clamped down, then unclamped and placed again on the floor. According to this report, given in Soziale Praxis of April 19, 1916, there is great complaint of abdominal trouble among the women who raise these weights. In one establishment which required very hard muscular work it is reported that nearly a third of the 42 women employed "have been disabled by illness."[1]

Clearly, in any occupation which requires heavy lifting—as, for instance, in core rooms—a maximum weight should be set. In New York State a maximum of 25 pounds has been fixed by law regulating women's work in foundries. This maximum was set in the "code" adopted by the American Foundrymen's Association at their annual convention last summer. A maximum of 25 pounds in lifting weights was adopted also in the valuable standards formulated by the Executives' Club of Detroit last spring, representing 40 of the largest industrial plants in that city.[2]

The establishment of a maximum weight in lifting is obviously a rough measure of protection. In all occupations safety lies only in the physical examination of all prospective workers, or better in the medical supervision of workers, as Dr. Schereschewsky has well phrased it in a recent address.[3] For some women doubtless even 25

[1] MONTHLY REVIEW of the U. S. Bureau of Labor Statistics, September, 1917, p. 135.
[2] Industrial Management, August, 1917.
[3] Public Health Reports. Reprint No. 234, Nov. 20, 1914.

pounds is excessive when lifting constitutes a large part of the day's work. The relation of the lifted weight to the chest and abdomen circumference, the total physical condition of the worker, should be determined and can be settled only by a medical examination before employment.

INDUSTRIAL POISONING.

Another obvious danger calling for close observation in some of the new occupations is that of industrial poisoning. Thanks to Bulletin No. 219 of the Federal Bureau of Labor Statistics, by Dr. Alice Hamilton, we have knowledge of the extent and nature of industrial poisoning in the manufacture of high explosives, so far as it could be ascertained by investigation of the first order. In this country women have not yet been employed in large numbers in the manufacture of TNT, in carrying on those nitration processes whose victims show the same symptoms, suffer, and die exactly as do the victims of gases in trench warfare. Yet it is known to the writer that in one of the worst conducted TNT factories, where the sanitary precautions are nil and the TNT is allowed to cover the ground, the workroom, and the workers themselves, women are among the operatives. As the manufacture of explosives grows by leaps and bounds in this country and new gases are developed and manufactured, as other poisons are increasingly used, such as the various dopes for airplane wings, women will increasingly be employed in these dangerous processes. As a sex they are known to experience more serious injury than men from such an industrial poisoning as lead. This may be true of other industrial poisons not yet studied. Safety here lies only in the enforcement of sanitary precautions, in periodic medical supervision, in the shortening of hours of labor, and in the prohibition of nightwork for women.

OVERFATIGUE AND NIGHTWORK.

In all of the new occupations as in the old, too much emphasis can not be laid upon the factor of fatigue in predisposing to illness and exhaustion. It did not need the well-recorded war-time experience of England to teach us that output together with health and vigor fails when hours of work are excessive, when Sunday work is permitted, and rest at night broken. Yet within the last year even the enlightened State of Massachusetts, the pioneer in labor legislation and for 20 years the leader in prohibiting nightwork for women employed in factories, has under the plea of war emergencies reestablished nightwork and overtime by special permit to specified establishments.

It is well known that the greatest efforts have been needed to prevent the breakdown of labor laws in many States and the reestablishment of excessive hours of labor for women.

The labor standards for European countries, especially for women and children, were in many respects lower than our own before the war. In the first rush of industry following the outbreak of the war these standards abroad were still further lowered. Yet it soon proved that the relaxing of standards failed to achieve its purpose; in England and France and more recently in Italy definite steps were taken by the Governments (according to a valuable forthcoming report of the Children's Bureau) to restore the provisions of the labor law in order to maintain output and conserve the workers. In Italy, indeed, the present standards are in some respects higher than before the war.[1]

Besides the recent reestablishment of nightwork in factories, another new form of work at night for women in this country is in the elevator service. Here is an occupation newly open to women throughout the land. They are operating elevators in department stores, hotels, and apartment houses, in large and small cities, from California and Utah to Texas and Maine. The work itself does not appear ill-adapted or injurious. The hours of duty, however, are often excessive and can not fail to be harmful. In New York City, for instance, girls are working in apartment houses 15 hours at a stretch; day and night work alternates each week, and when the shifts change the girls are on duty without relief from 6 p. m. to 12 o'clock noon, a continuous stretch of 18 hours. The girls are required to attend to the switchboard telephone as well as to run the elevator. Sunday work is required. One of the most serious abuses of this employment is the exposure of young girls to insult or danger on the all-night shift. In some instances no provision whatever is made for getting rest at night. In other cases an army cot is provided in a hall alcove. In another instance the young elevator attendant sought safety by running the elevator between the first and second landing to obtain sleep between summons.

Nightwork for women has been newly introduced also in connection with automobile cleaning. Women are being employed in New York City garages more than 12 hours each night—from 7 p. m. to 7.30 a. m. They clean from 30 to 35 cars during the night.

Another new occupation which exposes girls to moral dangers is the messenger service. In many cities girls are being increasingly employed to replace boys at this work, which should be closely watched. For the dangers involved in sending young boys to ques-

[1] Child Labor in Warring Countries. Children's Bureau, U. S. Department of Labor, Industrial Series No. 4, p. 61.

tionable houses or resorts has been so great that within the past few years legislation has been enacted in most of the States, raising the age limit of boys in the messenger service and prohibiting their employment after stated hours in the evening. It would indeed be a mockery if young girls were now employed at work which has been found unsafe for boys up to 21 years. To safeguard these young workers, legislation is needed so as to include the new occupations in the existing laws limiting hours of labor, etc. Other States might well follow the enlightened action of the State of Washington, where the employment of female minors in the messenger service has recently been prohibited by ruling of the Industrial Welfare Commission. In some States, too, efforts are on foot to regulate by law the new employment of girls as bootblacks.

THE NEED FOR EQUAL WAGES.

In regard to the general replacement of men by women workers, no single consideration is more important than the matter of wages. This is moreover, not a social or economic question alone. It is primarily a question of health and must be of the first importance to all those concerned with public health issue. It was Gen. Gorgas himself who put in a few trenchant words the close connection between wages and health. He ascribes to the results of increased wages of the common laborers the world-famous improvement in health at Panama, "I am satisfied," he said to a conference of health officers, "that to this improvement in social conditions caused by our high wages we principally owe our extraordinary improvement in general health conditions."[1]

Another medical opinion on the relation between wages and health has recently been well put in a study entitled, Occupation and Mortality:[2] "We believe," say Drs. Wynne and Guilfoy, "that wages have a most important bearing upon the morbidity and mortality of any occupation, because, where real wages are high, the standard of living is correspondingly high, housing is better, food is more plentiful and more nourishing, and, in short, conditions are more favorable to physical and mental well-being, which results in greater resistance to disease, more recuperative power, and a healthier enjoyment of life, all of which stimulates the worker to preserve his health and makes him more alert to guard against accidents; whereas when wages are low, home conditions are of necessity unfavorable, and if, in addition, shop conditions are also bad, as they frequently are, the hazards of any occupation are increased manifold."

[1] New York State Department of Health Monthly Bulletin, December, 1915, pp. 369–70.
[2] Occupation and Mortality: Their relation as indicated by the mortality returns in the city of New York for 1914. Reprint No. 400, Public Health Reports, June 8, 1917.

The great danger, from the standpoint of health, is that the employment of women should be resorted to merely in order to obtain cheap labor. As a matter of public health we must see to it that women are paid equal wages for equal work. Otherwise their employment can be and is daily being made the excuse for undercutting the standard wage of men and so reducing the standards of living in the community. The reports of the Children's Bureau and the Public Health Service have shown how infant mortality rises in direct proportion to fall in wage.

It is true that in many of the new occupations women are unskilled and need training. Yet even while they are being trained they should, as a matter of health, be paid an adequate wage. The standards adopted by the Executives' Club of Detroit, to which reference has been made, recommend that, while learning, women shall be paid the flat day rate paid to men for the same work or operation.

There are many other pressing health problems in women's new employment needing wise consideration, which can not even be enumerated here. Instances are beginning to multiply of the lack of decencies and sanitary provisions for women employed in railroad yards and roundhouses. The housing of women who must leave home is a pressing problem. The matter of clothing is highly important. Women obviously can not do men's work in ill-adapted clothes, such as skirts which are usually too full or too tight for safety, and which are dust gathering in the dangerous trades, or in high-heeled shoes, more quickly inducing fatigue. Separate entrances should be provided for men and women especially in occupations involving heat and grime. The nutrition of the workers, and the provision of restaurants or lunch counters are matters of immense importance.

SUMMARY: THREE ESSENTIAL SAFEGUARDS.

In summing up this brief survey of a large topic, emphasis should be laid upon three essential safeguards for girls and women entering upon men's occupations: Equal wages, additional legislation, and adequate medical supervision. I am aware that in making a plea for this last requisite I am treading upon very difficult ground. The pressure for physicians for military and civilian needs is so great that a plea for new industrial supervision may appear ill-timed. Yet if any one truth has emerged from three years of warfare, it is the indispensable nature of our industrial contribution. To preserve that is a part of the nation's self-preservation.

The methods to be used in obtaining adequate medical supervision are of primary importance, and in this connection the National Con-

sumers' League has engaged in a campaign for the establishment of industrial clinics.

Local conditions must determine whether these clinics should be under private, State, or Federal auspices. But the early diagnosis and treatment of workers suffering from industrial diseases by physicians who know industrial processes and conditions are the only means of more fully learning and controlling these diseases, hitherto little studied. The growing employment of women should be an added incentive to establishing industrial clinics, especially wherever large numbers of workers are engaged in dangerous processes. Where private means or enterprises are lacking, and where work on Government contracts is being done, it would seem peculiarly fitting for the Public Health Service to establish such clinics, and so lead the way in measures of enlightened prevention as well as care.

EMPLOYMENT OF WOMEN AND GIRLS IN GREAT BRITAIN.[1]

The position as regards the employment of females in July, 1917, is summed up in the following table, which shows (*a*) the expansion in the employment of women and girls since July, 1914, and (*b*) the extent to which women and girls are directly replacing men, according to the returns made by the employers:

SUMMARY OF THE POSITION AS REGARDS THE EMPLOYMENT OF FEMALES.

Occupation.	Estimated number of females employed July, 1914.	Increase since July, 1914.	Direct replacement of men by women.
Industries	2,184,000	518,000	464,000
Government establishments	2,000	202,000	191,000
Gas, water, and electricity (under local authorities)	600	4,000	4,000
Agriculture in Great Britain (permanent labor)	80,000	23,000	43,000
Transport (excluding tramways under local authorities)	17,000	72,000	74,000
Tramways (under local authorities)	1,200	16,000	16,000
Finance and banking	9,500	51,000	53,000
Commerce	496,000	324,000	328,000
Professions	67,500	20,000	21,000
Hotels, public houses, cinemas, theaters, etc	176,000	22,000	38,000
Civil service, post office	60,500	45,000	51,000
Civil service (other than post office)	4,500	53,000	48,000
Services under local authorities (other than tramways)	196,200	29,000	23,000
Total	3,295,000	1,382,000	1,354,000
Agriculture in Great Britain (casual labor)	50,000	39,000	38,000
Grand total	3,345,000	1,421,000	1,392,000

The growth since the war in the numbers of women employed in the metal and chemical trades, which cover most of the munition trades, is shown by the following table:

COURSE OF EMPLOYMENT OF WOMEN IN INDUSTRY.

	Numbers employed in metal and chemical trades.	Numbers employed in other industries.	All industries.
July, 1914	210,000	1,974,000	2,184,000
December, 1914	214,000	1,893,000	2,107,000
July, 1915	253,000	2,040,000	2,293,000
December, 1915	316,000	2,070,000	2,386,000
July, 1916	440,000	2,082,000	2,522,000
January, 1917	525,000	2,060,000	2,585,000
July, 1917	616,000	2,086,000	2,702,000

The numbers employed in the munition group have been above the prewar level at every date shown in the table, even as early as

[1] The Labour Gazette, London, November, 1917, p. 395.

December, 1914, when the other branches of industry were still suffering from unemployment. This growth in the numbers employed has been continued ever since, but at varying rates. Between December, 1914, and December, 1915, the numbers increased by about 100,000, but this increase for one year was easily surpassed in the following six months alone. Since July, 1916, the increase in the metal and chemical trades has not been maintained at quite the same rate, but, nevertheless, the numbers now employed are nearly 180,000 above those for that date.

It was during the same months (December, 1915, to July, 1916), that the employment of women in Government establishments received its greatest impetus. Thus in the establishments engaged on engineering work the numbers of women rose in that half-year from 2,700 to 32,500.

The position in the nonmunition industries is very different. They recovered from the first shock of war in the early part of 1915 and passed through a period of great activity when there was comparatively little competition for labor from the munition trades; as a result, between December, 1914, and July, 1915, there was an increase of nearly 150,000 in the numbers employed, though during this time the munition trades only increased by 39,000. This is the only period when the nonmunition trades drew in more women than the chemical and metal trades. During the latter half of 1915 and again during the first half of 1916 there was a further, though a quite slight, increase of women in the nonmunition trades, but between July, 1916, and January, 1917, the numbers fell very considerably, and this decrease has only just been made good, the figures for July, 1916, and July, 1917, being approximately equal.

The relation between the growth in the numbers employed and the numbers replacing men is very different in the munition and nonmunition trades. In the metal and chemical trades, in which the volume of work has developed enormously, the increase in the number of women employed is much in excess of the numbers replacing men. The reverse is true for all other industries; that is to say, the number of women employed on what was previously regarded as women's work has declined, and the increase in numbers is due entirely to replacement.

The figures as to employment in the metal and chemical trades in the above table do not show the full extent of the movement of women to munitions work, since all Government-owned establishments are excluded, in which the number employed is now 204,000. The number of women engaged in making munitions can not be stated exactly. The majority of the women in the metal and chemical trades are making munitions, but there are a considerable number

still on private and nonmunition work. On the other hand, there are a certain number in trades other than the metal and chemical trades who are engaged in the manufacture of munitions, and this number can only be roughly estimated. Taking all the relevant factors into consideration, it is believed that about 670,000 are employed on munition work, whilst 632,000 women are engaged on other Government work, such as the manufacture of clothing and food for the troops.

INDUSTRIAL UNREST IN GREAT BRITAIN.

The full report of the British Commission of Inquiry into Industrial Unrest has recently been reproduced in Bulletin 237 of this bureau. The report is presented in eight sections, showing the results of inquiries in eight separate districts of Great Britain. The commission was appointed June 12, 1917, and the completed report was submitted July 17, 1917.

The reports for all the districts emphasize as the leading cause of industrial unrest the fact that the cost of living has increased disportionately to the advance in wages and that food distribution is unequal. Another cause regarded as particularly serious is the restriction of personal freedom under the Munitions of War Acts, by which workmen have been tied up to particular factories and have been unable to obtain wages in proportion to their skill; in many cases the skilled man's wages were less than those of the unskilled. The requirement of leaving certificates was reported as one of the chief causes of dissatisfaction, but this restriction has been abolished by an order of the minister of munitions, effective October 15, 1917, under which any munitions worker may leave his present employment for other war work by giving a week's notice, or such longer notice as is provided for in his existing contract of service.

Dilution of labor and lack of confidence in the Government growing out of the surrender of trade-union customs and the fear that promises regarding the restoration of prewar conditions will not be kept are given special attention. It is stated that the irritation caused by the withdrawal of the trade-card scheme under the military service acts has subsided, but there remains much anxiety regarding the working of the schedule of protected occupations. All the reports refer to the lack of coordination between Government departments in dealing with labor, and considerable complaint on account of the delay in dealing with disputes and the difficulty of securing prompt awards is reported.

Besides the more general causes of industrial unrest certain causes, such as inadequate housing, liquor restrictions, and industrial fatigue,

are mentioned as acute in some districts. Mention is also made of lack of proper organization among the unions, inconsiderate treatment of women as regards wages, delay in granting pensions to soldiers, and inadequacy of compensation under the workmen's compensation act.

A number of recommendations are made by the commissioners. Of these the first is that there should be an immediate reduction in food prices, the increased cost of food to be borne to some extent by the Government, and that there should be a better system of distribution. The necessity of reducing hours, readjusting wages to a fairer basis for skilled as against unskilled workmen, the fuller use of trade-union machinery, and renewal by the Government of the declaration that trade-union rights and privileges which have been interfered with on account of the war shall be restored after the war are insisted upon. The commissioners strongly urge the adoption of the principle of the Whitley report for the establishment of industrial councils for each of the organized trades, such councils to be composed equally of employers and employees. This report, otherwise known as the interim report of the reconstruction committee on joint standing industrial councils, is reproduced in full in the bulletin under review. Regarding the settlement of disputes various suggestions are offered, to the effect that one central authority should be constituted, that local arbitration tribunals should be formed, that local commissioners with technical knowledge to settle disputes should be appointed, and that workshop committees should be established.

Other recommendations are that compensation under the workmen's compensation act should be increased, that announcement should be made of the Government's policy as regards housing, that pensions committees should have larger discretion in their treatment of men discharged from the army, that the recruiting system should have most careful handling, that the work of Government departments dealing with labor should be more thoroughly coordinated, and that when an agreement is drawn up between representatives of employers' federations and trade-unions it should be binding on all in the trade concerned.

While the report shows very clearly the prevalence and the nature of industrial unrest in Great Britain, it at the same time indicates that "there is a strong feeling of patriotism on the part of employers and employed throughout the country and they are determined to help the State in its present crisis."

PRECAUTIONS TO BE OBSERVED IN THE EMPLOYMENT OF FEMALE LABOR IN WAR INDUSTRIES IN FRANCE.[1]

The minister of munitions, under date of July 1, 1917, issued the following instructions relative to the employment of female workers in establishments engaged in the manufacture of war materials:

Age limits.—Girls having completed their thirteenth year may be employed, except in unhealthful shops. Females under 18 years of age may not be employed in dangerous working places or where considerable physical effort is required. They may be employed in powder factories only after reaching their sixteenth year, after medical examination, only in daywork and where their health is not in jeopardy.

Hours of work.—The hours of daily labor shall not exceed 10, with one or more rest periods amounting to one hour at least. The hours may be increased under stress of conditions, but not so as to include persons under 18 years of age.

Any person over 18 years of age may be employed at nightwork. Persons under that age shall not be employed between 9 p. m. and 5 a. m. Between the ages of 18 and 21 years, workers shall be selected according to their physical ability and family necessities.

Weekly rest days.—One rest day per week is recommended whenever possible. Sunday is preferable. In shops where continuous work is a necessity, the day of rest shall be accorded by turns, and where the three-shift system is in operation, 24 consecutive hours of rest shall be permitted if possible.

Maternity.—In cases of approaching maternity a change of work must be arranged for unless the work being performed permits the prohibition of nightwork and extra hours. Of the systems of working hours in use, that of the eight-hour shift is most suitable, but daywork on half time is still better. Constant standing in one position is prohibited, and work must be given which permits a continuous or predominantly sitting position. Great physical effort must be avoided. Harmful positions of the members or trunk of the body are prohibited. Protection against concussions, shocks, jars, and vibration, especially of the abdomen, must be provided. One month's rest immediately before maternity, or earlier, if prescribed by a physician, and a period of four weeks after must be granted. None of the measures for protection of women employees approaching maternity shall cause reduction of earnings. Periodic physical examination by physicians or midwives under the supervision of a physician shall be assured.

Nursing rooms, etc.—Nursing rooms, day nurseries, and infants' guard rooms are required as recommended by the committee on

[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale. June–July, 1917, p. 63.

female labor. Every establishment engaged in the manufacture of materials for national defense is required to provide a nursing room supplied with cradles, reserved exclusively for breast-fed babies. Here the babies shall be kept during working hours, and the mother shall be permitted without loss of earnings to leave her work for one-half an hour in the morning and one-half an hour in the afternoon for the purpose of nursing her child. Such mothers shall work in a sitting position and at daywork only. For children fed from the bottle an infants' room with cribs, and for children from 1 to 4 years of age a children's room shall be provided. Daily examination of children as they reach these rooms to discover contagious diseases is required, and all "doubtful" cases must be isolated and placed under individual care.

Mothers' allowances.—Every mother, whether paid by the day or otherwise, nursing her infant at the breast shall receive a bonus of 10 francs ($1.93) per month and also a premium of 25 per cent of her basic wage, but absences under these arrangements shall not exceed 1½ hours on any one day.

Supervision.—The establishment of a local advisory committee having a majority of its members female employees is recommended. This committee shall supervise the well-being of female workers, and designate one woman, preferably a mother, of unquestioned morality, cognizant of labor conditions, and of general hygienic requirements, and having the necessary tact and firmness of character to supervise women's work. She shall have special supervisory authority over matters relating to care of cribs, nursing room, infants' rooms, living, clothing, wash, lunch, and sleeping room, and in general all matters pertaining to the welfare of female laborers.

General and industrial hygiene.—When workers are housed in lodgings provided by the employer regular cleaning and moist dusting of floors, walls, and ceilings, frequent renewal of mattresses, disinfection of bedding, provision for suitable ventilation, and of sufficient heat during winter, are specifically required. Attention is also called to the necessity of an abundant supply of pure water, and the desirability of adequate lavatory and laundry facilities. It is also desirable to make special employees responsible for the cleanliness and hygienic condition of these cantonments.

Employers are urged not to confine their attention to the housing conditions of the workers lodged on their premises alone, but to consider also those who lodge elsewhere. They should take an active and helpful interest in all matters relating to the welfare of their employees, including lodgings, food, transportation, and any other, matters upon which the employees' health and comfort depend.

Sweeping, etc.—Dry sweeping in workrooms is condemned. When toxic substances are handled frequent cleaning with abundant water is required. In establishments not under continuous operation such cleaning is recommended immediately after ceasing work. A thorough cleaning of floors, walls, and ceilings is required once each week, at least. Exhaust systems are recommended for the removal of dust.

Crowding.—In relation to overcrowding it is recognized that difficulties are encountered in reconciling intensive production and sufficient working space, but overcrowding must not be permitted. The law provides a minimum space which in practice should be increased. Continuous currents of air when the generation of dust is suspected, double windows preventing intake of exterior dust, and ventilating chimneys or other efficient methods of artificial ventilation must be provided.

Lunch rooms—Drinking water.—Laws are in force prohibiting lunching in workrooms, and derogations of this law will not be permitted unless upon substantial reasons and after a thorough investigation by the minister of munitions. If lunch must necessarily be eaten in the establishment an appropriate room separated from the workrooms is suggested. Lunches may be here deposited in individual lockers closed with a key or clasp. Either stoves or steam tables for heating lunches must be provided.

Frequent analysis or other adequate examination of the condition of the water supplied for drinking is required, and should impurities be found immediate measures must be taken to sterilize and purify it. Occasionally the supply of pure drinking water may be temporarily interrupted, or the milk usually supplied to workers in toxic substances may run short. In either case the difficulty may be met by supplying boiled water, preferably with a slight infusion of some aromatic substance—tea, for instance.

Clothing.—Precautions regarding noninflammable and durable clothing for men engaged in dangerous work must be applied as well to women so engaged, the form, quality, and character depending always on the work in which engaged. Flowing garments are prohibited. In some occupations close-fitting blouses fastened at the neck and wrists are suitable, but for women working about machinery overalls are recommended. Caps completely covering the hair should be worn. When leaving the workrooms, work clothing must be deposited in well-ventilated individual lockers. Separate lockers are required for street clothing. Regular cleaning and repair of work clothing is obligatory.

Dressing rooms—washstands—shower baths.—Dressing rooms and washstands with running water should be at once installed in estab-

lishments not already thus equipped. These should be simple but comfortable, and their installation need not involve either much delay or great expense. Especial stress is placed on the installation and the enforced regular use by all employees of shower baths in establishments using chlorates or other toxics.

Water-closets.—Separate closets for women are obligatory and regulations relating to construction, maintenance, and disinfecting formulas are given.

Flies and mosquitoes.—Places in or near cantonments susceptible of breeding flies or mosquitoes must be rendered innocuous by chemicals or fire. Protective measures against their entrance into working places or living rooms are required.

Temperature, etc.—Methods of heating are recommended. A normal temperature must be maintained. Gas, oil, and petroleum heaters may be used only under exceptional conditions. Establishments are required to adopt methods to control the generation of noxious gases and the dissemination of dust, etc.

Dangerous and unhealthy occupations.—Women and young persons are not permitted in places where noxious emanations or deleterious vapors are given off in the manufacture of certain chemicals. Under the observation of special rules relative to hygiene and safety, females over 18 years of age may be employed in the manufacture of certain classes of powder and modern explosives, and, under proper precaution, in the mechanical sifting and barreling of picric acid.

Occupational diseases—Morbidity.—Every director or manager operating under the stress of national demands for national defense is required to make quarterly reports relative to the morbidity of the employees in his establishment—one relating to female, one to colonial, and one to male employees. Every epidemic shall be made the subject of a special report. Every death in the working force due to accident or to industrial poisoning must be reported within 48 hours.

Prophylactic measures, occupational diseases.—The use of certain protective appliances, such as masks, moist nose and mouth sponges or cloths, in addition to those already mentioned, must be insisted upon. Cloths and sponges must be frequently washed in tepid alkaline or acidulated water. Tissot masks are required in all places where there is extreme danger. In certain classes of work, gloves and goggles must be worn.

Accident-prevention devices.—Extra precautions must be observed for places where explosives, detonating gas, or inflammable powder is manufactured or stored. Safety lamps alone may be used. Conductors of electricity should be thoroughly insulated and placed out of reach of the hand, and every device which may emit sparks must

be adequately covered. Special rules have been already issued relative to fire protection.

Frequency of burns.—Burns appear with great frequency in the lists of industrial accidents and are responsible for much loss of time. Methods of handling work should be subject to minute precautions with a view to avoiding such accidents, and whenever possible dangerous operations should be modified or safeguards introduced. The individual worker should be protected against such risks by non-inflammable clothing, gloves, mask, and goggles. In places of special risk, vats of water into which the workers may throw themselves in case of need are recommended.

Medical-aid service.—Consulting offices, adequate first-aid station, a cantonment hospital, and a pharmacy are desirable. The necessity of providing medical service to be utilized in cases of accident and sickness, and in assisting in selection of employees, in making professional visits to the establishment, in supervision of the health of the employees, and in detecting epidemics is urged.

SETTLEMENT OF LABOR DISPUTES IN PRIVATE ESTABLISHMENTS MANUFACTURING WAR MATERIALS IN FRANCE.[1]

Under date of September 17, 1917, the minister of war issued a decree relative to the settlement of disputes between employers and employees. The provisions are:

Employers and employees in any establishment engaged in manufacturing arms, munitions, or war material, in which a collective dispute arises, are forbidden to break the contract of employment or to cease work until the question at issue shall have been submitted to conciliation and arbitration.

The minister of war shall designate in such districts as he may deem necessary a permanent conciliation and arbitration committee, consisting of representatives of employers and of employees in equal numbers. The committee shall be composed of at least four members, none of whom shall be subject to mobilization.

A declaration of the question in dispute shall be prepared either by the employer, or his agent, or by an employee duly accredited by at least 20 subscribing employees. This declaration is then forwarded to the official supervising the production of the particular class of goods affected, who shall notify the proper conciliation and arbitration committee. This committee shall meet in the office of the mayor with as little delay as possible. A full hearing shall be granted each party, and an effort made to reconcile the differences. Failing

[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale, August–September, 1917.

in this the committee shall render a decision within 24 hours after the last hearing. This award shall be signed by all members and entered as of record in the committee's minutes of proceedings.

If the members of the arbitration committee fail to agree, the committee shall designate one or more umpires for the purpose of arriving at a decision. Should the members not agree on an umpire or umpires the minister of war shall make such appointment, or call the issue before him for decision.

The umpire or umpires so appointed shall immediately hear the evidence of the former committee and of the interested parties, and within 24 hours after the last hearing shall render a decision and enter it upon record in their minutes.

The arbitral decision rendered by the committee or umpire and approved by the minister, or that made by the minister shall become effective immediately, or upon his order, and be posted by the employer in his workrooms, or if he fails to do so, it shall be posted at his expense.

If the employer refuses to accept the terms of the award the establishment is requisitioned in accordance with present laws.

If the award grants supplemental pay, under whatever title designated, either as wages or otherwise, and the employer refuses to comply with this decision, the administrative personnel of the establishment is requisitioned under the provisions of existing laws, in order to secure the extra payment awarded. The funds necessary to carry the award into effect are advanced by the minister of war, and retained from any sum hereafter due the establishment.

If the laborers refuse to accept the terms of the award, they are placed under requisition in accordance with existing laws.

Whenever any competent official shall receive notice of a collective dispute he shall immediately notify the district military authorities, and in order to maintain discipline and continuity of production, that authority shall place the entire personnel, supervising, administrative, and working forces under requisition until such time as an arbitral decision shall be posted.

The award rendered for one or more establishments, or for one or more classes of laborers, may by order of the minister of war be made applicable to all or any portion of other establishments, or to other occupational classes in the district, provided similar conditions exist therein.

This decree does not apply to mobilized workers, but otherwise applies to all establishments engaged in aeronautics, or engineering, and geographic and central administrations of shops and groups of shops organized or operating in the production of material by contract.

It applies to all yards and shops engaged in production for the commissary or health bureaus only when the work upon which they are engaged is for the use of the minister of munitions or for other bureaus themselves subject to this decree.

This decree is operative only to the date of termination of hostilities.

SATURDAY HALF HOLIDAY FOR WOMEN IN CLOTHING TRADES IN FRANCE.[1]

The law, dated 11th June last, which laid down the principle of freedom from work on Saturday afternoons for the duration of the war for women employed in the clothing trades in France (See The Labor Gazette for July, 1917, p. 238), provides that the conditions to be laid down for each trade and district shall be prescribed by administrative regulations. The first set of regulations under the act is dated 18th September, and was published in the Journal Officiel of 23d September last. It relates to the following occupations carried on in the Seine Department: Dressmaking, tailoring, men and women's underclothing manufacture, corset making, making up furs, fabric glove making, hosiery, and certain accessory trades, also wig and false-hair making. The hours worked on Saturday mornings in these trades must not exceed four, except in the case of wig and false-hair making, where the limit is five, and in all cases work must cease not later than 1 p. m. In certain of the above-named occupations where seasonal or exceptional pressure of work occurs, the Saturday half holiday may be suspended upon a specified number of occasions in the year, but any work done on Saturday afternoon under such circumstances must be paid for at the overtime rates usual in the occupation.

USE OF ALCOHOLIC LIQUORS AS RELATED TO INDUSTRIAL CONDITIONS IN FRANCE.

The interministerial committee on manual labor in France recently presented its report on an investigation of the effects of the use of alcoholic liquors as beverages.[2] The report says that in consideration of present conditions, which require the exercise to the fullest capacity of every industrial factor, and especially in so far as they relate to manual labor, the question of alcoholism becomes one of almost vital importance.

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[1] The Labour Gazette, London, November, 1917, p. 402.

[2] Bulletin du Ministère du Travail et de la Prévoyance Sociale. June–July, 1917, p. 275.

It was early recognized that alcoholism was a source of national weakness and shortened industrial production. Reliable reports indicate that a large percentage of absence from work is due to the use of intoxicating liquor; that in the coal mines, at the time the report was submitted, absences amounted to 13 or 14 per cent of possible days of labor, and that this was largely due to intemperance. It is estimated that coal production is decreased for this reason alone by 5 per cent. It is said "The day that liquor traffic is regulated in mining centers then will the question of absence from work be solved." There is not an industry which has not been compelled to report the effects of liquor drinking on production. "Women seem to be particularly affected. Brought into new surroundings, and influenced by unaccustomed conditions, they more readily fall into temptations."

While the law of March 16, 1915, prohibits the sale, either wholesale or retail, of absinthe and similar liquors, this provision is not universally enforced, and in some localities it is openly violated.

The law of March 8, 1917, forbids any person to carry into or to distribute, or any employer, manager, or person in authority as overseer, to permit to be carried into or distributed in any establishment subject to articles 65, Book II of the Labor Code, any spirituous liquors to be drunk on the premises, except wine, beer, cider, pear cider, and hydromel to which alcohol has not been added. Private distillation in excess of 10 liters (10.56 quarts) per year, for family use, of products grown by the distiller, is prohibited. This law is effective for one year after cessation of hostilities.

Recognizing the menace to national industry, the State has attempted, through orders issued by local and military authority, to interdict the sale of alcohol in various districts. The restrictions so ordered have in some cases met with such strong protest that important modifications permitting the sale in determined hours only have been made. Certain commanding generals have issued orders forbidding the sale to mobilized laborers, women, and colonial and foreign laborers.

Both employers and labor organizations have recognized the importance of this question on production. Some laborers' conventions have unanimously petitioned in favor of entirely prohibitive measures. Employers' associations have emphatically expressed the opinion that the liquor traffic is a menace, not only from an economic viewpoint, but to civilization, leading to moral, mental, and physical degeneracy.

The following statement is made by the committee on manual labor:

In a greater degree than ever the future will demand a population ever increasing in strength and numbers and in its aptitude for industrial labor.

The sale, distribution, or clandestine storing of alcoholic, as well as all other spirituous liquor for drink should be prohibited during the war.

Existing laws regulating places where such liquors are sold as beverages, the suppression of public drunkenness, and the sale and manufacture of absinthe should be rigorously enforced; and the use of alcohol for industrial purposes should be intensified to its fullest possible extent.

INTOXICATING LIQUORS IN GOVERNMENT-CONTROLLED SHOPS.[1]

According to a circular of August 5, 1917, the use of intoxicating liquors as a beverage was still a cause of deep concern with the War Office. The minister of munitions addressing the labor controllers said, "While there is no penalty provided by law which seems efficacious against the pernicious influence of places where liquors are dispensed, yet the state of war provides measures which no one in authority should hesitate to employ, i. e., the closing of such places as are convicted of contravention."

The controllers are required to report to the minister all cases where abuse is noticed, and to call upon military authority to immediately close the offending selling place. They are also required to report all action taken, and all penalties imposed by them.

"It being indispensible that drunkenness be repressed with great severity, especially repeated intoxication, controllers are required to report all such cases to the minister in order that he shall suggest the penalties to be imposed, and it is ordered that notices of such penalties shall be posted for the information of laborers."

[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale. August–September, 1917, p. 95*.

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PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

The retail price of food as a whole shows a decrease of 1 per cent in November, 1917, as compared with the month previous. Of the 27 articles for which prices are reported to the Bureau of Labor Statistics 12 decreased in price, 4 remained the same, and 11 articles showed an increase as compared with October.

Pork chops decreased 11 per cent; hens, 5 per cent; sirloin and round steak, 4 per cent each; flour, 3 per cent; and sugar, 2 per cent. Onions increased in price 18 per cent; lard and butter, 4 per cent each; eggs, 5 per cent; potatoes, 3 per cent; rice, 2 per cent; and meal, 1 per cent. Beans, bread, ham, and bacon remained the same price as in October.

The following table shows the course of prices in the United States in October and November, 1917:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON OCT. 15 AND NOV. 15, 1917.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1916.]

Article.	Unit.	Average money price.		Relative price.	
		Oct. 15, 1917.	Nov. 15, 1917.	Oct. 15, 1917.	Nov. 15, 1917.
Sirloin steak	Pound	$0.330	$0.317	121	116
Round steak	do	.309	.296	126	121
Rib roast	do	.257	.250	121	118
Chuck roast	do	.218	.212	127	123
Plate beef	do	.165	.163	129	127
Pork chops	do	.388	.345	171	152
Bacon	do	.482	.482	168	168
Ham	do	.426	.426	145	145
Lard	do	.312	.326	178	186
Hens	do	.312	.295	132	125
Salmon, canned	do	.283	.287	140	142
Eggs	Dozen	.551	.581	147	155
Butter	Pound	.508	.528	129	134
Cheese	do	.348	.346	135	134
Milk	Quart	.127	.128	140	141
Bread	16-oz. loaf[1]	.088	.088	135	135
Flour	Pound	.070	.068	159	155
Corn meal	do	.070	.071	206	209
Rice	do	.111	.114	122	125
Potatoes	do	.031	.032	115	119
Onions	do	.049	.058	100	118
Beans, navy	do	.189	.189	172	172
Prunes	do	.165	.166	123	124
Raisins, seeded	do	.150	.148	116	115
Sugar	do	.097	.095	121	119
Coffee	do	.305	.302	102	101
Tea	do	.612	.617	112	113
All articles combined				138	136

[1] 16 ounces, weight of dough.

In the year from November 15, 1916, to November 15, 1917, prices of food as a whole advanced 23 per cent. Potatoes is the only article that shows a decline in price. Corn meal advanced 87 per cent; bacon 62 per cent; pork chops 48 per cent; beans 39 per cent; salmon 38 per cent; milk 33 per cent; and lard 27 per cent.

Food as a whole was 48 per cent higher on November 15, 1917, than on November 15, 1913, and 46 per cent higher than on November 15, 1914. During this four-year period, corn meal advanced 127 per cent; flour 109 per cent; lard 104 per cent; bacon 77 per cent; sugar 75 per cent; and potatoes 72 per cent. No article declined in price.

Taking November in each of the four years, November, 1915, only shows a decline in price of food as a whole when compared with the same month in a preceding year. For November, 1915, the price of food as a whole was the same as in November, 1913, and was 1 per cent lower than in November, 1914.

A table showing the average and relative retail prices in November of each year from 1913 to 1917 follows:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON NOV. 15 OF EACH YEAR, 1913 TO 1917, INCLUSIVE.

[The relative price shows the per cent that the average price on Nov. 15 of each year was of the average price for the year 1916.]

Article.	Unit.	Average money price Nov. 15—					Relative price Nov. 15—				
		1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
Sirloin steak	Pound	$0.254	$0.254	$0.257	$0.270	$0.317	93	93	94	99	116
Round steak	do	.228	.235	.228	.243	.296	93	96	93	99	121
Rib roast	do	.197	.204	.199	.210	.250	93	96	94	99	118
Chuck roast	do		.167	.162	.170	.212		97	94	99	123
Plate beef	do		.128	.120	.128	.163		100	94	100	127
Pork chops	do	.216	.218	.209	.234	.345	95	96	92	103	152
Bacon	do	.273	.281	.273	.298	.482	95	98	95	104	168
Ham	do	.270	.273	.268	.332	.426	92	93	91	113	145
Lard	do	.159	.156	.145	.256	.326	91	89	83	146	186
Hens	do	.205	.205	.203	.238	.295	87	87	86	101	125
Salmon, canned	do			.198	.208	.287			98	103	142
Eggs	Dozen	.495	.450	.458	.514	.581	132	120	122	137	155
Butter	Pound	.386	.394	.366	.437	.528	98	100	93	111	134
Cheese	do			.232	.292	.346			90	113	134
Milk	Quart	.091	.090	.089	.096	.128	100	99	98	106	141
Bread	16-oz. loaf[1]		.057	.062	.075	.088		88	95	115	135
Flour	Pound	.033	.037	.037	.057	.068	74	83	84	129	155
Corn meal	do	.031	.033	.032	.038	.071	92	96	95	112	209
Rice	do			.090	.091	.114			99	100	125
Potatoes	do	.019	.015	.017	.035	.032	69	54	62	128	119
Onions	do			.033	.051	.058			68	105	118
Beans, navy	do			.085	.136	.189			77	124	172
Prunes	do			.133	.138	.166			99	103	124
Raisins, seeded	do			.125	.137	.148			97	106	115
Sugar	do	.054	.062	.065	.086	.095	68	77	81	107	119
Coffee	do			.299	.299	.302			100	100	101
Tea	do			.546	.546	.617			100	100	113
All articles combined							92	93	92	111	136

[1] 16 ounces, weight of dough.

The two tables which follow give average retail prices for 29 articles in 45 cities.

For 16 cities average prices are shown for November 15, 1913, November 15, 1916, and for October 15 and November 15, 1917.

For 29 cities average prices are given for November 15, 1917. The prices for groceries in Jacksonville, Fla., are not shown, as less than 80 per cent of the grocers of that city sent in their reports to the bureau.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES ON NOV. 15, 1913, 1916, AND 1917, AND OCT. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.				Boston, Mass.			
		Nov. 15, 1913.	Nov. 15, 1916.	1917		Nov. 15, 1913.	Nov. 15, 1916.	1917		Nov. 15, 1913.	Nov. 15, 1916.	1917	
				Oct. 15.	Nov. 15.			Oct. 15.	Nov. 15.			Oct. 15.	Nov. 15.
Sirloin steak	Lb.	$0.242	$0.254	$0.311	$0.309	$0.228	$0.248	$0.326	$0.311	$0.340	$0.352	$0.442	$0.418
Round steak	Lb.	.213	.219	.278	.280	.213	.232	.315	.304	.350	.357	.449	.421
Rib roast	Lb.	.190	.194	.241	.238	.175	.200	.259	.253	.239	.258	.315	.307
Chuck roast	Lb.	.158	.154	.212	.202	.150	.162	.220	.220	.162	.202	.269	.249
Plate beef	Lb.	.....	.106	.157	.150	.....	.138	.169	.175	.....	.....	.....	.....
Pork chops	Lb.	.250	.245	.399	.363	.182	.208	.371	.333	.224	.249	.409	.353
Bacon, sliced	Lb.	.311	.315	.490	.501	.212	.255	.457	.451	.246	.271	.458	.458
Ham, sliced	Lb.	.308	.330	.439	.432	.275	.350	.477	.468	.310	.358	.456	.443
Lard	Lb.	.153	.214	.319	.328	.150	.200	.326	.327	.158	.221	.309	.329
Lamb	Lb.	.202	.244	.316	.321	.180	.240	.333	.313	.205	.251	.345	.336
Hens	Lb.	.210	.223	.337	.317	.202	.250	.321	.296	.243	.268	.344	.326
Salmon, canned	Lb.	.....	.166	.246	.235	.....	.170	.254	.255	.....	.203	.294	.300
Eggs, strictly fresh	Doz.	.400	.433	.482	.501	.459	.488	.519	.580	.606	.669	.660	.737
Eggs, storage	Doz.	.....	.370	.....	.435	.331	.388	.....	.440	.352	.398	.....	.477
Butter	Lb.	.398	.443	.551	.551	.384	.446	.538	.539	.382	.428	.524	.517
Cheese	Lb.	.....	.308	.355	.347	.....	.290	.360	.358	.....	.275	.328	.326
Milk	Qt.	.106	.125	.159	.175	.087	.092	.117	.120	.089	.096	.130	.140
Bread	16-oz.[1]	.....	.076	.091	.090	.....	.063	.082	.082	.....	.068	.081	.081
Flour	Lb.	.035	.053	.072	.071	.031	.059	.070	.068	.036	.064	.075	.075
Corn meal	Lb.	.026	.031	.059	.054	.026	.031	.064	.064	.035	.043	.075	.076
Rice	Lb.	.....	.079	.108	.111	.....	.098	.112	.114	.....	.099	.115	.118
Potatoes	Lb.	.023	.040	.038	.040	.018	.034	.030	.030	.017	.035	.034	.035
Onions	Lb.	.....	.057	.059	.059	.....	.052	.055	.049	.....	.057	.056	.058
Beans, navy	Lb.	.....	.135	.188	.188	.....	.146	.187	.190	.....	.131	.184	.184
Prunes	Lb.	.....	.133	.179	.180	.....	.130	.165	.173	.....	.144	.168	.168
Raisins	Lb.	.....	.149	.162	.161	.....	.128	.146	.146	.....	.143	.150	.150
Sugar	Lb.	.057	.095	.104	.110	.048	.080	.092	.096	.054	.086	.098	.102
Coffee	Lb.	.....	.282	.294	.292	.....	.235	.277	.281	.....	.334	.341	.344
Tea	Lb.	.....	.617	.796	.784	.....	.550	.634	.649	.....	.600	.646	.648

Article.	Unit.	Buffalo, N. Y.				Chicago, Ill.				Cleveland, Ohio.			
Sirloin steak	Lb.	$0.222	$0.240	$0.315	$0.311	$0.247	$0.268	$0.306	$0.297	$0.250	$0.250	$0.307	$0.290
Round steak	Lb.	.194	.220	.293	.289	.214	.225	.273	.265	.224	.223	.288	.270
Rib roast	Lb.	.164	.182	.247	.243	.195	.219	.247	.245	.186	.198	.232	.226
Chuck roast	Lb.	.152	.162	.220	.220	.159	.167	.213	.206	.170	.173	.211	.206
Plate beef	Lb.	.....	.131	.172	.166	.....	.131	.165	.162	.....	.121	.158	.156
Pork chops	Lb.	.198	.226	.388	.349	.193	.212	.358	.312	.216	.228	.387	.331
Bacon, sliced	Lb.	.212	.248	.461	.460	.324	.316	.475	.497	.281	.299	.468	.467
Ham, sliced	Lb.	.263	.333	.432	.424	.323	.346	.439	.445	.357	[2].224	.436	.441
Lard	Lb.	.142	.203	.306	.315	.150	.204	.299	.309	.163	.228	.318	.332
Lamb	Lb.	.156	.192	.289	.276	.193	.220	.314	.282	.181	.212	.306	.288
Hens	Lb.	.200	.236	.309	.297	.174	.210	.271	.258	.199	.236	.317	.294
Salmon, canned	Lb.	.....	.180	.275	.280	.....	.243	.300	.301	.....	.183	.270	.291
Eggs, strictly fresh	Doz.	.485	.600	.551	.595	.398	.271	.469	.496	.500	.560	.570	.605
Eggs, storage	Doz.	.306	.358	.....	.428	.303	.379	.....	.411	.357	.420	.....	.431
Butter	Lb.	.381	.428	.510	.506	.365	.424	.487	.492	.407	.458	.530	.530
Cheese	Lb.	.....	.291	.333	.334	.....	.296	.368	.374	.....	.287	.350	.348
Milk	Qt.	.080	.100	.130	.140	.080	.090	.129	.119	.080	.090	.120	.120
Bread	16-oz.[1]	.....	.070	.089	.087	.....	.070	.093	.090	.....	.069	.089	.089
Flour	Lb.	.030	.056	.065	.064	.029	.052	.066	.064	.032	.058	.071	.069
Corn meal	Lb.	.026	.032	.070	.074	.029	.038	.071	.069	.030	.037	.073	.076
Rice	Lb.	.....	.093	.108	.113	.....	.094	.103	.114	.....	.093	.111	.118
Potatoes	Lb.	.018	.034	.031	.032	.017	.035	.028	.027	.020	.038	.032	.033
Onions	Lb.	.....	.046	.056	.056	.....	.050	.048	.045	.....	.058	.050	.055
Beans, navy	Lb.	.....	.138	.182	.196	.....	.140	.186	.190	.....	.147	.191	.194
Prunes	Lb.	.....	.135	.156	.166	.....	.139	.161	.163	.....	.134	.165	.179
Raisins	Lb.	.....	.120	.137	.140	.....	.150	.145	.150	.....	.139	.143	.143
Sugar	Lb.	.053	.082	.100	.099	.051	.079	.088	.085	.054	.086	.097	.097
Coffee	Lb.	.....	.286	.293	.295	.....	.300	.285	.287	.....	.288	.291	.295
Tea	Lb.	.....	.479	.534	.539	.....	.525	.573	.588	.....	.475	.566	.556

[1] Loaf; 16 ounces, weight of dough.

[2] Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES ON NOV. 15, 1913, 1916, AND 1917, AND OCT. 15, 1917—Continued.

Article.	Unit.	Denver, Colo.				Detroit, Mich.				Milwaukee, Wis.			
		Nov. 15, 1913.	Nov. 15, 1916.	1917		Nov. 15, 1913.	Nov. 15, 1916.	1917		Nov. 15, 1913.	Nov. 15, 1916.	1917	
				Oct. 15.	Nov. 15.			Oct. 15.	Nov. 15.			Oct. 15.	Nov. 15.
Sirloin steak	Lb.	$0.229	$0.234	$0.307	$0.282	$0.256	$0.248	$0.305	$0.294	$0.236	$0.243	$0.293	$0.280
Round steak	Lb.	.203	.190	.285	.262	.206	.216	.275	.268	.216	.216	.280	.269
Rib roast	Lb.	.167	.184	.232	.220	.200	.204	.242	.235	.184	.186	.238	.229
Chuck roast	Lb.	.153	.160	.207	.197	.152	.162	.197	.193	.162	.166	.217	.205
Plate beef	Lb.	.....	.105	.144	.138	.....	.121	.158	.154	.....	.121	.160	.152
Pork chops	Lb.	.204	.209	.402	.346	.194	.218	.369	.326	.196	.214	.370	.310
Bacon, sliced	Lb.	.280	.325	.520	.506	.223	.253	.457	.458	.278	.300	.472	.475
Ham, sliced	Lb.	.292	.338	.463	.468	.270	[1].227	.436	.420	.282	.300	.436	.430
Lard	Lb.	.160	.213	.329	.344	.164	.208	.314	.333	.160	.214	.315	.324
Lamb	Lb.	.152	.194	.303	.298	.151	.202	.313	.286	.190	.227	.316	.298
Hens	Lb.	.185	.216	.284	.278	.192	.234	.314	.293	.172	.206	.272	.238
Salmon, canned	Lb.	.....	.185	.264	.269	.....	.192	.288	.293	.....	.219	.277	.278
Eggs, strictly fresh	Doz.	.450	.510	.503	.528	.410	.485	.532	.582	.450	.438	.482	.483
Eggs, storage	Doz.	.330	.400	.....	.444	.322	.390	.....	.411	.330	.373	.....	.414
Butter	Lb.	.350	.440	.495	.485	.371	.428	.502	.505	.366	.424	.499	.498
Cheese	Lb.	.....	.306	.352	.351	.....	.282	.344	.342	.....	.306	.369	.344
Milk	Qt.	.084	.083	.116	.120	.090	.100	.120	.120	.070	.080	.110	.110
Bread	16 oz.[2]	.....	.076	.089	.089	.....	.073	.084	.082	.....	.075	.089	.088
Flour	Lb.	.025	.049	.057	.057	.031	.057	.068	.066	.031	.058	.069	.064
Corn meal	Lb.	.026	.034	.061	.061	.029	.034	.075	.083	.033	.043	.078	.077
Rice	Lb.	.....	.093	.111	.116	.....	.085	.116	.118	.....	.096	.114	.115
Potatoes	Lb.	.016	.031	.023	.029	.017	.035	.029	.027	.017	.035	.027	.028
Onions	Lb.	.....	.041	.039	.049	.....	.048	.049	.055	.....	.051	.047	.048
Beans, navy	Lb.	.....	.115	.185	.186	.....	.144	.194	.191	.....	.140	.193	.195
Prunes	Lb.	.....	.135	.179	.182	.....	.128	.170	.164	.....	.147	.165	.158
Raisins	Lb.	.....	.146	.144	.143	.....	.124	.140	.136	.....	.138	.148	.147
Sugar	Lb.	.051	.085	.089	.089	.052	.086	.104	.088	.053	.084	.091	.088
Coffee	Lb.	.....	.300	.300	.300	.....	.280	.307	.299	.....	.283	.263	.270
Tea	Lb.	.....	.510	.573	.577	.....	.430	.545	.576	.....	.528	.584	.586

Article.	Unit.	New York, N. Y.				Philadelphia, Pa.				Pittsburgh, Pa.			
Sirloin steak	Lb.	$0.259	$0.274	$0.356	$0.326	$0.305	$0.322	$0.392	$0.374	$0.273	$0.283	$0.356	$0.345
Round steak	Lb.	.254	.271	.360	.335	.257	.279	.365	.344	.240	.246	.329	.318
Rib roast	Lb.	.213	.226	.298	.279	.215	.234	.291	.283	.217	.223	.274	.265
Chuck roast	Lb.	.160	.171	.236	.218	.180	.195	.252	.237	.173	.177	.241	.231
Plate beef	Lb.	.....	.161	.213	.209	.....	.132	.174	.169	.....	.121	.171	.163
Pork chops	Lb.	.226	.243	.399	.339	.225	.246	.400	.356	.225	.234	.406	.350
Bacon, sliced	Lb.	.256	.272	.464	.459	.269	.299	.467	.469	.304	.321	.483	.494
Ham, sliced	Lb.	[1].198	[1].224	[1].314	[1].309	.304	.357	.479	.482	.298	.352	.465	.456
Lard	Lb.	.162	.210	.313	.331	.155	.216	.328	.330	.157	.215	.328	.331
Lamb	Lb.	.151	.192	.284	.265	.188	.236	.331	.311	.203	.241	.363	.342
Hens	Lb.	.211	.255	.323	.295	.231	.273	.344	.322	.238	.289	.378	.338
Salmon, canned	Lb.	.....	.244	.334	.340	.....	.187	.260	.263	.....	.213	.301	.299
Eggs, strictly fresh	Doz.	.561	.554	.627	.647	.508	.524	.548	.593	.463	.464	.528	.553
Eggs, storage	Doz.	.373	.402	.....	.446	.347	.397	.....	.434	.334	.375	.....	.453
Butter	Lb.	.399	.442	.515	.516	.443	.486	.562	.567	.404	.450	.527	.528
Cheese	Lb.	.....	.283	.340	.338	.....	.295	.361	.357	.....	.291	.357	.351
Milk	Qt.	.090	.098	.138	.140	.080	.088	.110	.122	.092	.103	.125	.127
Bread	16 oz.[2]	.....	.069	.088	.088	.....	.056	.079	.078	.....	.067	.092	.090
Flour	Lb.	.032	.058	.078	.077	.032	.058	.075	.072	.032	.057	.072	.070
Corn meal	Lb.	.035	.046	.082	.083	.029	.035	.071	.072	.030	.038	.081	.087
Rice	Lb.	.....	.092	.115	.119	.....	.097	.118	.123	.....	.094	.110	.112
Potatoes	Lb.	.023	.040	.038	.036	.023	.040	.038	.038	.020	.035	.032	.033
Onions	Lb.	.....	.059	.059	.060	.....	.055	.056	.054	.....	.053	.052	.053
Beans, navy	Lb.	.....	.141	.185	.187	.....	.133	.185	.184	.....	.142	.188	.195
Prunes	Lb.	.....	.137	.167	.169	.....	.139	.164	.167	.....	.136	.165	.172
Raisins	Lb.	.....	.131	.146	.147	.....	.123	.139	.133	.....	.138	.148	.146
Sugar	Lb.	.049	.080	.097	.100	.050	.080	.094	.096	.057	.087	.101	.105
Coffee	Lb.	.....	.262	.265	.261	.....	.285	.283	.279	.....	.271	.299	.298
Tea	Lb.	.....	.445	.521	.532	.....	.550	.583	.585	.....	.575	.702	.715

[1] Whole.

[2] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES ON NOV. 15, 1913, 1916, AND 1917, AND OCT. 15, 1917—Concluded.

Article.	Unit.	St. Louis, Mo.				San Francisco, Cal.			
		Nov. 15, 1913.	Nov. 15, 1916.	1917		Nov. 15, 1913.	Nov. 15, 1916.	1917	
				Oct. 15.	Nov. 15.			Oct. 15.	Nov. 15.
Sirloin steak	Lb.	$0.266	$0.258	$0.308	$0.296	$0.210	$0.205	$0.236	$0.240
Round steak	Lb.	.236	.243	.301	.289	.197	.196	.231	.236
Rib roast	Lb.	.201	.203	.256	.249	.213	.207	.232	.234
Chuck roast	Lb.	.160	.166	.206	.205	.155	.143	.162	.167
Plate beef	Lb.	.....	.128	.166	.167	.....	.133	.157	.162
Pork chops	Lb.	.178	.196	.374	.301	.242	.237	.363	.363
Bacon, sliced	Lb.	.258	.274	.486	.480	.344	.367	.519	.537
Ham, sliced	Lb.	.273	.288	.456	.456	.320	.350	.475	.488
Lard	Lb.	.129	.201	.293	.315	.177	.211	.302	.322
Lamb	Lb.	.183	.222	.308	.295	.170	.206	.306	.289
Hens	Lb.	.165	.200	.275	.248	.248	.278	.315	.334
Salmon, canned	Lb.	.....	.187	.284	.285	.....	.179	.249	.250
Eggs, strictly fresh	Doz.	.389	.430	.460	.471	.650	.592	.608	.638
Eggs, storage	Doz.	.325	.383	.....	.393	.407	.390	.....	.451
Butter	Lb.	.381	.446	.526	.522	.404	.413	.545	.501
Cheese	Lb.	.....	.303	.369	.353	.....	.238	.316	.324
Milk	Qt.	.088	.080	.132	.130	.100	.100	.121	.121
Bread	16 oz.[1]	.....	.069	.093	.092	.....	.070	.083	.083
Flour	Lb.	.029	.054	.063	.061	.034	.050	.064	.061
Corn meal	Lb.	.025	.033	.066	.064	.035	.043	.074	.074
Rice	Lb.	.....	.086	.106	.112	.....	.084	.105	.108
Potatoes	Lb.	.018	.035	.029	.031	.019	.030	.031	.031
Onions	Lb.	.....	.053	.047	.044	.....	.041	.032	.034
Beans, navy	Lb.	.....	.141	.192	.187	.....	.123	.177	.174
Prunes	Lb.	.....	.144	.173	.170	.....	.124	.152	.147
Raisins	Lb.	.....	.156	.167	.168	.....	.127	.143	.132
Sugar	Lb.	.051	.081	.089	.088	.054	.082	.082	.081
Coffee	Lb.	.....	.242	.283	.281	.....	.317	.303	.305
Tea	Lb.	.....	.543	.628	.626	.....	.517	.534	.539

Article.	Unit.	Seattle, Wash.				Washington, D. C.			
Sirloin steak	Lb.	$0.236	$0.224	$0.267	$0.267	$0.265	$0.268	$0.350	$0.360
Round steak	Lb.	.206	.200	.251	.253	.225	.234	.337	.332
Rib roast	Lb.	.200	.186	.225	.221	.210	.214	.278	.277
Chuck roast	Lb.	.156	.140	.181	.183	.176	.180	.243	.237
Plate beef	Lb.	.....	.109	.153	.154	.....	.139	.191	.184
Pork chops	Lb.	.240	.230	.400	.396	.214	.236	.415	.370
Bacon, sliced	Lb.	.320	.320	.490	.522	.264	.272	.497	.492
Ham, sliced	Lb.	.300	.310	.431	.434	.313	.325	.438	.432
Lard	Lb.	.169	.197	.301	.307	.150	.200	.318	.325
Lamb	Lb.	.184	.200	.287	.296	.191	.232	.360	.337
Hens	Lb.	.242	.218	.271	.283	213	.248	.325	.311
Salmon, canned	Lb.	.....	.188	.277	.288	.....	.172	.236	.269
Eggs, strictly fresh	Doz.	.592	.600	.652	.666	.479	.495	.546	.645
Eggs, storage	Doz.	.375	.389	.....	.488	.350	.398	.....	.453
Butter	Lb.	.408	.437	.546	.542	.403	.464	.534	.534
Cheese	Lb.	.....	.244	.312	.308	.....	.282	.351	.354
Milk	Qt.	.100	.098	.120	.120	.090	.100	.140	.140
Bread	16 oz.[1]	.....	.064	.092	.092	.....	.073	.090	.090
Flour	Lb.	.029	.048	.060	.059	.038	.057	.075	.073
Corn meal	Lb.	.032	.039	.075	.074	.026	.031	.062	.067
Rice	Lb.	.....	.084	.109	.111	.....	.093	.115	.121
Potatoes	Lb.	.014	.023	.023	.022	.018	.031	.031	.033
Onions	Lb.	.....	.048	.040	.045	.....	.044	.054	.052
Beans, navy	Lb.	.....	.131	.190	.187	.....	.139	.201	.201
Prunes	Lb.	.....	.133	.146	.144	.....	.146	.178	.177
Raisins	Lb.	.....	.131	.145	.134	.....	.132	.154	.150
Sugar	Lb.	.061	.088	.089	.088	.051	.081	.094	.096
Coffee	Lb.	.....	.326	.316	.311	.....	.294	.281	.286
Tea	Lb.	.....	.500	.542	.554	.....	.512	.592	.630

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON NOV. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Average retail prices, Nov. 15, 1917.									
		Birmingham, Ala.	Bridgeport, Conn.	Butte, Mont.	Charleston, S. C.	Cincinnati, Ohio.	Columbus, Ohio.	Dallas, Tex.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.
Sirloin steak	Lb.	$0.340	$0.396	$0.303	$0.275	$0.258	$0.321	$0.304	$0.420	$0.312	$0.312
Round steak	Lb.	.310	.378	.276	.262	.252	.298	.292	.362	.304	.291
Rib roast	Lb.	.250	.312	.243	.247	.227	.251	.248	.272	.228	.238
Chuck roast	Lb.	.202	.257	.200	.192	.183	.233	.213	.228	.213	.193
Plate beef	Lb.	.163	.165	.137	.150	.153	.178	.177	.....	.162	.157
Pork chops	Lb.	.348	.352	.369	.385	.317	.333	.365	.340	.343	.357
Bacon, sliced	Lb.	.530	.513	.575	.486	.451	.457	.525	.441	.484	.491
Ham, sliced	Lb.	.445	.496	.483	.436	.427	.456	.470	.434	.442	.425
Lard	Lb.	.329	.324	.324	.321	.312	.333	.301	.319	.316	.326
Lamb	Lb.	.325	.295	.313	.344	.278	.317	.325	.330	.250	.312
Hens	Lb.	.286	.283	.314	.349	.298	.300	.260	.324	.260	.312
Salmon, canned	Lb.	.278	.341	.373	.262	.262	.269	.280	.277	.233	(1)
Eggs, strictly fresh	Doz.	.488	.745	.708	.513	.518	.502	.491	.729	.519	(1)
Eggs, storage	Doz.	.450	.467	.540	.439	.453	.447	.438	.465	.413	(1)
Butter	Lb.	.561	.504	.550	.525	.512	.507	.498	.501	.518	(1)
Cheese	Lb.	.341	.343	.345	.341	.359	.340	.358	.328	.380	(1)
Milk	Qt.	.152	.140	.150	.160	.120	.110	.150	.128	.103	.150
Bread	16-oz.[2]	.094	.093	.105	.094	.080	.087	.087	.085	.084	.090
Flour	Lb.	.071	.073	.075	.077	.072	.067	.066	.077	.069	(1)
Corn meal	Lb.	.050	.087	.081	.068	.068	.066	.074	.080	.065	(1)
Rice	Lb.	.124	.122	.130	.088	.118	.116	.114	.117	.123	(1)
Potatoes	Lb.	.036	.036	.024	.038	.032	.030	.038	.034	.031	(1)
Onions	Lb.	.055	.060	.050	.055	.051	.057	.056	.053	.052	(1)
Beans, navy	Lb.	.194	.188	.190	.172	.185	.192	.181	.181	.203	(1)
Prunes	Lb.	.150	.167	.173	.166	.163	.159	.171	.166	.178	(1)
Raisins	Lb.	.163	.156	.150	.153	.146	.152	.148	.148	.167	(1)
Sugar	Lb.	.104	.100	.101	.098	.094	.099	.097	.105	.099	(1)
Coffee	Lb.	.333	.319	.416	.282	.274	.289	.340	.328	.294	(1)
Tea	Lb.	.739	.629	.782	.630	.700	.716	.808	.506	.833	(1)

Article.	Unit.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Cal.	Louisville, Ky.	Manchester, N. H.	Memphis, Tenn.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.
Sirloin steak	Lb.	$0.311	$0.300	$0.265	$0.286	$0.435	$0.284	$0.228	$0.348	$0.398	$0.273
Round steak	Lb.	.286	.273	.240	.268	.398	.268	.213	.352	.365	.238
Rib roast	Lb.	.231	.244	.222	.227	.271	.243	.201	.278	.302	.228
Chuck roast	Lb.	.197	.195	.189	.202	.237	.203	.167	.237	.268	.186
Plate beef	Lb.	.161	.166	.157	.177	.....	.170	.133	.176	.....	.151
Pork chops	Lb.	.333	.359	.368	.335	.322	.346	.305	.344	.336	.360
Bacon, sliced	Lb.	.494	.509	.527	.507	.452	.483	.467	.441	.498	.530
Ham, sliced	Lb.	.440	.415	.522	.439	.417	.432	.433	.324	.500	.450
Lard	Lb.	.338	.340	.309	.329	.332	.324	.318	.332	.332	.314
Lamb	Lb.	.259	.288	.297	.305	.324	.316	.236	.308	.338	.295
Hens	Lb.	.253	.269	.326	.302	.339	.286	.217	.308	.338	.297
Salmon, canned	Lb.	.288	.295	.298	.255	.296	.291	.314	.344	.322	.319
Eggs, strictly fresh	Doz.	.468	.481	.625	.495	.676	.453	.454	.706	.792	.461
Eggs, storage	Doz.	.424	.450	.449	.423	.446	.407	.394	.479	.480	.397
Butter	Lb.	.500	.530	.485	.526	.542	.501	.470	.536	.518	.512
Cheese	Lb.	.350	.374	.342	.362	.335	.332	.323	.354	.336	.348
Milk	Qt.	.123	.165	.120	.123	.120	.150	.102	.140	.128	.136
Bread	16-oz.[2]	.094	.089	.079	.085	.084	.096	.093	.082	.087	.080
Flour	Lb.	.065	.069	.063	.069	.072	.069	.059	.077	.071	.078
Corn meal	Lb.	.072	.060	.076	.060	.077	.057	.064	.080	.078	.069
Rice	Lb.	.111	.104	.102	.119	.107	.103	.102	.117	.114	.101
Potatoes	Lb.	.032	.035	.020	.033	.033	.031	.026	.037	.034	.042
Onions	Lb.	.051	.053	.037	.045	.053	.046	.043	.060	.054	.052
Beans, navy	Lb.	.193	.187	.173	.201	.187	.195	.193	.182	.191	.173
Prunes	Lb.	.148	.183	.151	.165	.159	.173	.157	.169	.172	.170
Raisins	Lb.	.154	.149	.133	.161	.150	.145	.145	.147	.152	.155
Sugar	Lb.	.099	.091	.084	.102	.101	.102	.091	.100	.108	.096
Coffee	Lb.	.262	.328	.303	.276	.342	.302	.310	.298	.335	.274
Tea	Lb.	.592	.750	.571	.722	.561	.727	.504	.530	.550	.613

[1] Prices not shown, less than 80 per cent of reports from grocers for November, 1917, received by bureau.

[2] Loaf; 16 ounces weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON NOV. 15, 1917—Concluded.

Article.	Unit.	Average retail prices, Nov. 15, 1917.								
		Omaha, Nebr.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	Rochester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Springfield, Ill.
Sirloin steak	Lb.	$0.300	$0.254	$0.512	$0.328	$0.293	$0.270	$0.277	$0.332	$0.320
Round steak	Lb.	.285	.244	.418	.306	.282	.239	.256	.299	.305
Rib roast	Lb.	.228	.236	.327	.253	.248	.220	.233	.271	.232
Chuck roast	Lb.	.200	.182	.289	.235	.232	.189	.195	.225	.218
Plate beef	Lb.	.150	.145	.....	.189	.177	.138	.157	.165	.180
Pork chops	Lb.	.322	.347	.362	.369	.354	.309	.392	.358	.344
Bacon, sliced	Lb.	.481	.513	.474	.479	.453	.452	.511	.476	.485
Ham, sliced	Lb.	.446	.455	.506	[1] .360	.427	.438	.432	.429	.435
Lard	Lb.	.332	.330	.339	.328	.334	.334	.345	.319	.330
Lamb	Lb.	.296	.277	.350	.308	.288	.228	.290	.324	.342
Hens	Lb.	.244	.255	.352	.290	.330	.222	.312	.347	.228
Salmon, canned	Lb.	.286	.338	.294	.235	.300	.287	.293	.287	.265
Eggs, strictly fresh	Doz.	.465	.650	.707	.507	.643	.446	.554	.625	.486
Eggs, storage	Doz.	.422	.497	.481	.460	.439	.403	.492	.456	.433
Butter	Lb.	.497	.548	.536	.550	.517	.471	.542	.507	.524
Cheese	Lb.	.349	.317	.340	.355	.343	.334	.339	.325	.377
Milk	Qt.	.120	.124	.130	.143	.128	.103	.111	.124	.125
Bread	16-oz.[2]	.094	.085	.089	.084	.087	.063	.091	.092	.098
Flour	Lb.	.063	.057	.072	.072	.069	.061	.054	.074	.067
Corn meal	Lb.	.067	.071	.075	.062	.078	.066	.074	.....	.072
Rice	Lb.	.114	.116	.116	.117	.115	.110	.102	.119	.121
Potatoes	Lb.	.029	.022	.037	.036	.030	.026	.021	.032	.030
Onions	Lb.	.044	.042	.052	.061	.052	.039	.045	.058	.050
Beans, navy	Lb.	.180	.163	.185	.211	.198	.201	.194	.190	.211
Prunes	Lb.	.168	.138	.176	.158	.180	.163	.156	.167	.175
Raisins	Lb.	.160	.135	.145	.148	.150	.144	.146	.147	.168
Sugar	Lb.	.092	.088	.099	.101	.101	.094	.092	.100	.094
Coffee	Lb.	.309	.325	.339	.280	.295	.321	.350	.318	.300
Tea	Lb.	.604	.567	.575	.691	.503	.529	.629	.567	.658

[1] Whole. [2] Loaf; 16 ounces weight of dough.

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

Figures compiled by the Bureau of Labor Statistics furnish a comparison of wholesale and retail price changes among a number of important food articles since 1913. In collecting data for the comparison it was found that in some instances slight differences of grade or quality existed between the articles for which wholesale prices were obtainable and those for which retail prices could be secured. It was found impracticable, also, in most instances to obtain both kinds of quotations for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in showing price variations in the retail as compared with the wholesale markets.

In the table which follows the wholesale price is, in each case, the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article

and city in question. To obtain a better comparison of wholesale with retail prices, the list of articles has been revised to some extent since the last issue of the MONTHLY REVIEW. The base period has also been shifted to the year 1913 in order to provide a fairer standard for measuring price changes. The initials W. and R. are used to designate wholesale and retail prices, respectively.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917.				
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.
Beef:										
Steer loin ends (hips), Chicago....W..	Lb..	$0.168	$0.175	$0.160	$0.205	$0.200	$0.200	$0.190	$0.235	$0.235
Sirloin steak, Chicago.....R..	Lb..	.232	.260	.258	.281	.265	.293	.302	.306	.297
Beef:										
Steer rounds, No. 2, Chicago.....W..	Lb..	.131	.145	.143	.145	.120	.155	.170	.190	.180
Round steak, Chicago.....R..	Lb..	.202	.233	.228	.241	.227	.256	.266	.273	.265
Beef:										
Steer ribs, No. 2, Chicago.....W..	Lb..	.157	.165	.145	.175	.160	.210	.200	.230	.190
Rib roast, Chicago.....R..	Lb..	.195	.212	.213	.229	.223	.241	.246	.247	.245
Beef:										
No. 2 loins, city, New York.....W..	Lb..	.158	.183	.170	.200	.180	.190	.190	.275	.220
Sirloin steak, New York .....R..	Lb..	.259	.274	.282	.294	.284	.318	.337	.356	.326
Beef:										
No. 2 rounds, city, New York.....W..	Lb..	.121	.135	.135	.145	.130	.170	.175	.190	.183
Round steak, New York.....R..	Lb..	.249	.270	.271	.289	.275	.315	.337	.360	.335
Beef:										
No. 2 ribs, city, New York .....W..	Lb..	.151	.165	.160	.180	.160	.200	.190	.275	.225
Rib roast, New York.....R..	Lb..	.218	.225	.227	.243	.238	.270	.279	.298	.279
Pork:										
Loins, Chicago.....W..	Lb..	.149	.165	.150	.165	.165	.240	.250	.330	.250
Chops, Chicago.....R..	Lb..	.190	.204	.201	.217	.227	.285	.292	.358	.312
Pork:										
Loins, Western, New York.....W..	Lb..	.152	.163	.153	.165	.170	.235	.235	.300	.260
Chops, New York.....R..	Lb..	.217	.230	.217	.239	.248	.319	.326	.399	.339
Bacon:										
Short clear sides, Chicago.....W..	Lb..	.127	.139	.113	.159	.158	.218	.247	.318	.316
Sliced, Chicago.....R..	Lb..	.294	.318	.315	.328	.316	.395	.439	.475	.497
Ham:										
Smoked, Chicago.....W..	Lb..	.166	.175	.163	.190	.188	.243	.243	.283	.283
Smoked, sliced, Chicago.....R..	Lb..	.266	.338	.328	.349	.333	.382	.414	.439	.445
Lard:										
Prime contract, New York.....W.	Lb..	.110	.104	.080	.133	.159	.215	.201	.246	.280
Pure, tub, New York.....R..	Lb..	.160	.156	.151	.168	.213	.263	.274	.313	.331
Lamb:										
Dressed, round, Chicago.....W..	Lb..	.149	.170	.190	.190	.200	.220	.260	.270	.230
Leg of, yearling, Chicago .....R..	Lb..	.198	.219	.208	.231	.232	.263	.287	.314	.282
Poultry:										
Dressed fowls, New York.....W..	Lb..	.182	.188	.175	.215	.220	.265	.248	.285	.235
Dressed hens, New York.....R..	Lb..	.214	.220	.219	.256	.261	.293	.287	.323	.295
Butter:										
Creamery, extra, Chicago.....W..	Lb..	.310	.265	.265	.275	.370	.440	.375	.435	.438
Creamery, extra, Chicago.....R..	Lb..	.362	.312	.322	.335	.438	.484	.432	.487	.492
Butter:										
Creamery, extra, New York.....W..	Lb..	.323	.280	.270	.285	.395	.459	.395	.443	.445
Creamery, extra, New York.....R..	Lb..	.382	.328	.336	.346	.460	.513	.453	.515	.516
Butter:										
Creamery, extra, San Francisco...W..	Lb..	.317	.245	.265	.255	.355	.390	.385	.460	.435
Creamery, extra, San Francisco...R..	Lb..	.388	.329	.338	.333	.425	.452	.455	.545	.501
Cheese:										
Whole milk, American twins, Chicago .....W..	Lb..	.142	.133	.145	.145	.218	.223	.216	.246	.228
Full cream, American, Chicago...R..	Lb..	.....	.....	.229	.242	.321	.327	.339	.368	.374
Cheese:										
Whole milk, State, New York....W..	Lb..	.154	.144	.146	.151	.220	.245	.238	.255	.225
Full cream, American, New York.R..	Lb..	.....	.....	.229	.228	.301	.335	.328	.340	.338
Cheese:										
Fancy Cal. flats, San Francisco...W..	Lb..	.159	.125	.115	.135	.180	.215	.200	.220	.230
Full cream, American, S. F.....R..	Lb..	.....	.....	.200	.229	.242	.297	.297	.316	.324

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917				
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.
Milk:										
Fresh, Chicago.....W..	Qt..	$0.038	$0.036	$0.037	$0.036	$0.045	$0.054	$0.047	$0.074	$0.070
Fresh, bottled, delivered, Chicago..R..	Qt..	.080	.080	.080	.081	.100	.100	.100	.129	.119
Milk:										
Fresh, New York.....W..	Qt..	.035	.030	.030	.031	.051	.049	.050	.072	.077
Fresh, bottled, delivered, N. Y...R..	Qt..	.090	.090	.090	.090	.100	.109	.114	.138	.140
Milk:										
Fresh, San Francisco.....W..	Qt..	.039	.039	.038	.038	.038	.038	.043	.059	.059
Fresh, bottled, delivered, S. F...R..	Qt..	.100	.100	.100	.100	.100	.100	.100	.121	.121
Eggs:										
Fresh, firsts, Chicago.....W..	Doz.	.226	.188	.168	.218	.485	.305	.310	.370	.415
Strictly fresh, Chicago.....R..	Doz.	.292	.261	.248	.296	.525	.376	.406	.469	.496
Eggs:										
Fresh, firsts, New York.....W..	Doz.	.249	.215	.200	.241	.505	.330	.350	.400	.470
Strictly fresh, New York.....R..	Doz.	.397	.333	.326	.372	.667	.424	.477	.627	.647
Eggs:										
Fresh, extra pullets, S. F.....W..	Doz.	.268	.230	.220	.240	.380	.280	.320	.435	.520
Strictly fresh, San Francisco.....R..	Doz.	.373	.338	.310	.333	.480	.374	.392	.608	.638
Flour:										
Winter patent, Kansas City.....W..	Bbl.	4.012	3.550	6.225	4.750	8.950	11.450	11.150	10.500	10.500
Aristos, Kansas City.....R..	Bbl.	5.923	5.733	7.800	6.700	10.600	13.689	13.680	13.066	12.760
Flour:										
Standard patent, Minneapolis....W..	Bbl.	4.584	4.500	7.025	6.050	9.450	11.025	12.000	10.550	10.200
Pillsbury's Best, Minneapolis.....R..	Bbl.	5.600	5.800	8.200	7.000	10.800	13.200	13.424	11.984	11.456
Flour:										
Fancy patent, St. Louis.....W..	Bbl.	4.181	3.700	5.890	4.925	8.675	11.375	11.375	11.250	11.100
Gold Medal, St. Louis.....R..	Bbl.	6.077	6.000	8.187	6.933	10.587	12.853	13.200	13.100	12.267
Meal, corn:										
Fine, yellow, New York.....W..	Lb..	.014	.014	.017	.019	.027	.031	.040	.049	.049
Fine, yellow, New York.....R..	Lb..	.034	.034	.035	.042	.051	.057	.070	.082	.083
Beans:										
Medium, choice, New York.....W..	Lb..	.040	.040	.058	.098	.108	.130	.154	.138	.....
Navy, white, New York.....R..	Lb..	.....	.....	.081	.113	.149	.162	.188	.185	.187
Potatoes:										
White, good to choice, Chicago....W..	Bu..	.614	1.450	.400	.975	1.750	2.800	2.625	1.135	1.950
White, Chicago.....R..	Bu..	.900	1.640	.700	1.856	2.370	3.455	2.975	1.660	1.623
Rice:										
Head, New Orleans.....W..	Lb..	.050	.054	.049	.046	.048	.049	.071	.077	.078
Head, New Orleans.....R..	Lb..	.....	.....	.075	.074	.074	.088	.101	.100	.101
Sugar:										
Granulated, New York.....W..	Lb..	.043	.042	.059	.075	.066	.081	.074	.082	.082
Granulated, New York.....R..	Lb..	.049	.046	.063	.079	.074	.087	.084	.097	.100

Relative wholesale and retail prices, expressed as percentages of the average money price for 1913, are contained in the table that follows. A few articles included in the preceding table are omitted from this one, owing to lack of satisfactory data for 1913. It will be seen from the table that since the beginning of the present year the retail prices of most of the commodities included in the exhibit have fluctuated at a relatively lower level as compared with their 1913 base than have the wholesale prices. This is particularly noticeable in the case of bacon, lard, dressed lamb, butter, milk, eggs, flour, corn meal, and potatoes. Comparing November prices with the average for 1913, it is seen that only 3 articles of the 28 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are rib roast at Chicago and dressed poultry and granulated sugar at New York. In most of the other months of 1917 the

retail prices of these articles were relatively lower than were the wholesale prices.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July—			1917				
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.
Beef:									
Steer loin ends (hips), Chicago.....W..	100	104	95	122	119	119	113	140	140
Sirloin steak, Chicago.....R..	100	112	111	121	114	126	130	132	128
Beef:									
Steer rounds, No. 2, Chicago.....W..	100	111	109	111	92	118	130	145	137
Round steak, Chicago.....R..	100	115	113	119	112	127	132	135	131
Beef:									
Steer ribs, No. 2, Chicago.....W..	100	105	92	111	102	134	127	146	121
Rib roast, Chicago.....R..	100	109	109	117	114	124	126	127	126
Beef:									
No. 2 loins, city, New York.....W..	100	116	108	127	114	120	120	174	139
Sirloin steak, New York.....R..	100	106	109	114	110	123	130	137	126
Beef:									
No. 2 rounds, city, New York.....W..	100	112	112	120	107	140	145	157	151
Round steak, New York.....R..	100	108	109	116	110	127	135	145	135
Beef:									
No. 2 ribs, city, New York.....W..	100	109	106	119	106	132	126	182	149
Rib roast, New York.....R..	100	103	104	111	109	124	128	137	128
Pork:									
Loins, Chicago.....W..	100	111	101	111	111	161	168	221	168
Chops, Chicago.....R..	100	107	106	114	119	150	154	188	164
Pork:									
Loins, western, New York.....W..	100	107	101	109	112	155	155	197	171
Chops, New York.....R..	100	106	100	110	114	147	150	184	156
Bacon:									
Short, clear sides, Chicago.....W..	100	109	89	125	124	172	194	250	249
Sliced, Chicago.....R..	100	108	107	112	107	134	149	162	169
Hams:									
Smoked, Chicago.....W..	100	105	98	114	113	146	146	170	170
Smoked, sliced, Chicago.....R..	100	127	123	131	125	144	156	165	167
Lard:									
Prime, contract, New York.....W..	100	95	73	121	145	195	183	224	255
Pure, tub, New York.....R..	100	98	94	105	133	164	171	196	207
Lamb:									
Dressed, round, Chicago.....W..	100	114	128	128	134	148	174	181	154
Leg of, yearling, Chicago.....R..	100	111	105	117	117	133	145	159	142
Poultry:									
Dressed fowls, New York.....W..	100	103	96	118	121	146	136	157	129
Dressed hens, New York.....R..	100	103	102	120	122	137	134	151	138
Butter:									
Creamery, extra, Chicago.....W..	100	85	85	89	119	142	121	140	141
Creamery, extra, Chicago.....R..	100	86	89	93	121	134	119	135	136
Butter:									
Creamery, extra, New York.....W..	100	87	84	88	122	139	122	137	138
Creamery, extra, New York.....R..	100	86	88	91	120	134	119	135	135
Butter:									
Creamery, extra, San Francisco.....W..	100	77	84	80	112	123	121	145	137
Creamery, extra, San Francisco.....R..	100	85	87	86	110	116	117	140	129
Milk:									
Fresh, Chicago.....W..	100	95	97	95	118	142	124	195	184
Fresh, bottled, delivered, Chicago.....R..	100	100	100	101	125	125	125	161	149
Milk:									
Fresh, New York.....W..	100	86	86	89	146	140	143	206	220
Fresh, bottled, delivered, New York.....R..	100	100	100	100	111	121	127	153	156
Milk:									
Fresh, San Francisco.....W..	100	100	97	97	97	97	110	151	151
Fresh, bottled, delivered, San Francisco.R..	100	100	100	100	100	100	100	121	121
Eggs:									
Fresh, firsts, Chicago.....W..	100	83	74	96	215	135	137	164	184
Strictly fresh, Chicago.....R..	100	89	85	101	180	129	139	161	170
Eggs:									
Fresh, firsts, New York.....W..	100	86	80	97	203	133	141	161	189
Strictly fresh, New York.....R..	100	89	82	94	168	107	120	158	163
Eggs:									
Fresh, extra pullets, San Francisco.....W..	100	86	82	90	142	105	119	162	194
Strictly fresh, San Francisco.....R..	100	91	83	80	129	100	105	163	171

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100)—Concluded.

Article and city.	1913: Average for year.	July—			1917				
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.
Flour:									
Winter patent, Kansas City.....W..	100	89	155	118	223	285	278	262	262
Aristos, Kansas City.....R..	100	97	132	113	179	231	231	221	215
Flour:									
Standard patent, Minneapolis.....W..	100	98	153	132	206	241	262	230	223
Pillsbury's Best, Minneapolis.....R..	100	104	146	125	193	236	240	214	205
Flour:									
Fancy patent, St. Louis .....W..	100	88	139	118	207	272	272	269	265
Gold Medal, St. Louis.....R..	100	99	135	114	174	212	217	216	202
Meal, corn:									
Fine, yellow, New York.....W..	100	100	121	136	193	221	286	350	350
Fine, yellow, New York.....R..	100	100	103	124	150	168	206	241	244
Potatoes:									
White, good to choice, Chicago.....W..	100	236	65	159	285	456	428	185	318
White, Chicago.....R..	100	182	78	151	263	384	331	184	180
Sugar:									
Granulated, New York.....W..	100	98	137	174	153	188	172	191	191
Granulated, New York.....R..	100	94	129	161	151	178	171	198	204

FOOD CONTROL.

GOVERNMENT FOOD CONTROL IN GERMANY.

A report soon to be issued by the U. S. Bureau of Labor Statistics will deal with the food situation in 1917 in the countries of the allied central powers (Germany, Austria-Hungary, Bulgaria, and Turkey). This report, data for which have been obtained from leading newspapers in these countries, gives a general review of the food situation in each of them, and shows what the prospects are for the 1917 harvest, what measures the Government has adopted in the attempt to control the food supply and to secure as far as possible its equitable distribution among all classes of the population, and in what spirit these regulations have been received by the people. A summary of the food situation in Germany is here given.[1]

That the outlook in regard to the food supply in Germany is not overbright is recognized by the German press. The bread-grain harvest is believed to be an average one. Herr Sundermann, editor of the German Agricultural Association's bulletin, states: "The yield is, on the whole, that of a medium harvest; here and there it is below this, although the premature ripening has not assumed the proportions feared in certain districts. In any case there will be no grain to spare, as we might have expected from the first, and we shall have to strain every nerve to make the grain last till the next harvest. The good quality, fortunately, guarantees that the bread will be wholesome and more beneficial." The fresh-fruit supply will not be very good, as much of the late fruit was gathered before it was ripe. Much is hoped for from the potato crop, and some imports are expected from occupied territory. In other respects the prospect is not so hopeful and the authorities hardly attempt to make it appear otherwise.

At present the situation, due to the raising of the bread ration and to a better supply of potatoes and other vegetables and of fruit,

[1] The facts in this article were taken from the following newspapers: Leipziger Volkszeitung, Volksfreund (Brunswick), Europäische Staats- und Wirtschafts-Zeitung, Vossische Zeitung (Berlin), Berliner Tageblatt, Münchner Neueste Nachrichten, Frankfurter Zeitung, Schlesische Zeitung (Breslau), Berliner Lokal-Anzeiger, Vorwärts (Berlin), Deutsche Tageszeitung (Berlin), Fleischer Zeitung (Berlin), Bremer Bürger-Zeitung, Hamburger Fremdenblatt, Darmzeitung (Berlin), Deutsche Landwirtschaftliche Presse, Hannoverscher Kurier, Die Konjunktur (Berlin), Norddeutsche Allgemeine Zeitung (Berlin), and Münchner Post.

is probably easier than it has been for some time. Nevertheless there is in the daily press evidence of very considerable discontent, and that not among the working classes only.

Germany is shown to be confronted with a difficult problem, that of maintaining the proper balance of food supply among the needs of the army, of agriculture, of industry, and of the civilian population. Interesting in this connection, and significant at once of the anxiety of the authorities to obtain fats and of the general shortage of foodstuffs, is an announcement in the Berlin Lokal-Anzeiger for October 3, 1917, that the collecting offices are paying cash or soup cubes for fruit kernels and melon seeds, from which to extract oil for margarine. This payment in soup cubes—which are rated at the cash price of 2½ pfennigs (0.6 cent) per cube—is a special favor.

In regard to the live stock and meat situation, Herr von Waldow, the new secretary of state for the war food bureau, said in a statement to press representatives:

> It is obvious that, besides meeting the needs of the army, we must have regard to the maintenance of agricultural production. Hence, before all, agricultural draft animals must be adequately fed. If, as is unfortunately probable, this is incompatible with the provision of sufficient fodder for the fattening of swine and the maintenance of our present stock of cattle, we must proceed to a systematic reduction of our stock of pigs and cattle. Naturally that will have its effect on the supply of meat, milk, and fat. In the case of meat, a temporary increase in the ration would be followed by a decrease. It will be particularly difficult this winter to keep up the supply of milk and butter.

During the past spring and summer many complaints have been made because of the increasing occurrence of the so-called "food excursions." By this was meant the practice among urban dwellers of going out to the rural districts to secure food illicitly. According to a proclamation issued by the commanding general of the Province of Brandenburg: "People now go out, not merely to buy, but to steal food or take it forcibly; they have the effrontery to help themselves to standing field and garden crops, often long before these are ripe. The injury to the farmers and to our future supply is obvious. Robbing the fields and damaging the crops is in war time a crime, and the strongest measures must be taken against it."

The Government regulations controlling each of the principal foodstuffs—meat, potatoes, fats and oils, eggs, milk, butter, vegetables, fruit, sugar, etc.—are not always successful from all points of view. This fall the Government granted various bonuses for the speedy delivery of potatoes. The object of hastening the delivery was attained. The potatoes poured into the towns at a quite embarrassing rate. In some places rations were doubled; in others two or three weeks' rations were issued in a single week. The potatoes were arriving in such quantities that the communes could not handle them.

Nevertheless the Imperial Potato Office ordered that they be accepted. The consequence was that, for want of cartage facilities, the railroad cars could not be unloaded and stood in the freight yards impeding traffic. The potatoes deteriorated and had to be sorted. Potatoes of the first late variety do not keep well, so people could not store them for winter use, and large quantities were therefore lost to the food supply.

The granting of the bonuses also aroused considerable criticism on the score of the resultant high prices to the consumer. According to the Leipziger Volkszeitung of September 3, 1917, the consumer's price must cover the basic price of production, agent's commission, speed bonus, loading bonus, and possibly a dispatch bonus—altogether about 7.50 or 8 marks ($1.78 or $1.90) per centner (110.23 pounds). There will still remain cost of freight, carriage, and storage, so that the final price may amount to 10 marks ($2.38) or more per centner.[1]

How the food orders are received in some instances is shown by an article in the above-named newspaper on the occasion of the increase in the bread ration which took effect August 13, 1917:

> Those entitled to the supply will quickly discover what this new regulation means to them. Instead of the meat supplement, 500 grams [1.1 pounds] of bread will be supplied till October 1. That this is not sufficient compensation need not be pointed out. After October 1, the 500 grams of bread will be omitted and potatoes will be supplied instead. It is impossible to go on substituting one food for another in the hope of making the consumers believe they are being thus compensated.

Figures taken from the same paper showing the prices of certain articles of food in August, 1917, as compared with those prevailing at the outbreak of the war, indicate that along with the decrease in the food supply has gone an enormous rise in food prices. These figures show that the increases in prices of the principal articles are: Bread, 7 per cent; wheat flour, 30 per cent; lard, 371 per cent; first-quality butter, 142 per cent; condensed milk, 209 per cent; eggs, 357 per cent; potatoes, 233 per cent; and salad oil, 250 per cent.

In one section of the report are shown, as far as data on this point could be obtained, the average weekly food rations in 24 representative towns of Germany for the four weeks ending August 26, 1917. Although food rations are generally fixed by the Imperial War Food Bureau for the whole Empire, in practice the rations apportioned to the civilian population vary greatly from locality to locality and are dependent on the actual supply on hand.

As a step toward making the available food suffice to feed the whole populace, war kitchens have been established in all but 56 of

[1] There are 60 pounds in a bushel of potatoes; $2.38 per centner is equivalent to $1.30 per bushel.

the 536 communes which have a population of 10,000 or more each. A person fed at a war kitchen is required to surrender to the kitchen a number of food tickets representing the kinds and amounts of foods furnished him by the kitchen. These food tickets are issued by the authorities, and entitle the holder to purchase the articles of food named in the amounts specified. For meat and potatoes, tickets are required in nearly every town, but fat, pulse, farinaceous foods, and flour are more often supplied irrespective of tickets.

The war kitchens in most towns provide only midday meals, but where evening meals are served allowances are made from a fund provided by the King of Bavaria. This fund applies to all Germany.

The comparative popularity of war kitchens is a good index to the actual condition of the food supply. It is interesting, therefore, to find a statement in the Münchner Neueste Nachrichten of September 19, 1917, that in spite of the better harvest there will, according to an official intimation, probably be an increase in the number of people who use the kitchens this year, especially if the fat shortage should increase.

The question of grading food prices according to income has recently been much discussed in the German press. Twenty-one of the larger cities, however, have after investigation given up the idea because of the technical difficulties of drawing a just limit. The fluctuations of income within the year, the taxation according to the previous year's income, the number and age of the children, social obligations—all add to the difficulties. In Altona 84 per cent of the population would belong to the poorer classes, who would have to be privileged. In Berlin the number with a taxable income of over 6,000 marks ($1,428) forms only 1 per cent. In Elberfeld 85 per cent have a taxable income of less than 2,400 marks ($571.20). In Saarbrücken 87 per cent earn less than 3,000 marks ($714).

The limited supply of food and the wide use of food substitutes seem to have had an effect on the public health. During the summer of 1917 numerous reports of the prevalence of dysentery in Germany appeared. An article by Prof. Schwalbe states: "Most of the cases must be considered as a result of war conditions—indigestible or deleterious foodstuffs, or fruit obtained in a less fresh condition than formerly. However, the general opinion is that the bread, badly milled and badly baked, is the cause."

The Berlin Vossische Zeitung of September 2, 1917, states: "According to current reports last month, one had the impression that every third person was suffering from dysentery. But such was, in reality, not the case. The infectious cases were limited to a small number, and quite a small percentage was fatal." The article ends, however, with the statement: "The total number of cases of dysen-

tery for Prussia during the period August 5 to 11 was 3,806, with 339 deaths."

The Vorwärts for September 5, 1917, states that "the spring months of 1917, following the bad winter months, show a great increase in the number of deaths from phthisis in Berlin. The monthly tables published by the Berlin Statistical Bureau for the time up to May record for the spring months March, April, and May, 500, 542, and 564 (in all 1,606) deaths from phthisis (including laryngeal phthisis), against 375, 331, and 326 (in all 1,032) deaths in the same months of last year. The deaths from pneumonia also greatly increased. In the three months, 366, 362, and 281 deaths (in all 1,009) were reported, as against 260, 192, and 170 (in all 622) last year. From other diseases of the lungs (including pleurisy) there died 106, 128, and 103 (in all 337) persons, as against 86, 57, and 47 (in all 190) last year. The death roll from the three above-named diseases amounted in the spring of 1917 to 2,952 against 1,844 in the spring of 1916. This increase can only partly be explained by the inclemency of the weather."

The above figures, taken from the official report, show a startling condition of affairs. Comparing the mortality figures for lung diseases for the three spring months of 1917 and 1916, we find that deaths from phthisis increased 56 per cent, from pneumonia 62 per cent, from other lung diseases 77 per cent, and from all lung diseases 60 per cent. The observation that these increases "can only partly be explained by the inclemency of the weather" is overconservative. A more plausible explanation is underfeeding and bad food. Much has been made in this country of the difference between death from actual "starvation" and death from diseases which prove fatal because of underfeeding and improper feeding. The distinction so laboriously made is without a difference. Deaths have increased because food is insufficient. Consumption and other diseases have merely accelerated death from "slow starvation."

The infant mortality rate has also increased. The Vorwärts states that "infant mortality is unusually high this year in Berlin. It is true that the actual number of deaths is below that of recent years, but this is explained by the extraordinary decline in the birth rate. The proportion of the number of infant deaths to the number of births is considerably more unfavorable this year than last." This organ says that there may be several causes for this lamentable increase in infant mortality, but it should be investigated how far the deterioration in the quality of milk is responsible.

WAGES AND HOURS OF LABOR.

AGRICULTURAL WAGES IN GREAT BRITAIN.

PROVISIONS IN CORN PRODUCTION ACT FOR THEIR REGULATION.[1]

Agricultural Wages Board.—The Corn Production Act, 1917, passed on 21st August, provides for the establishment by the Board of Agriculture and Fisheries, after consultation with the Minister of Labor, of an Agricultural Wages Board for England and Wales. The main object for which the Wages Board is established is the fixing of minimum rates of wages for "workmen" employed in agriculture—that is to say, rates of wages which, in the opinion of the Wages Board, are the lowest which ought to be paid to "workmen" in the district for which the rates are fixed. The term "workmen" includes boys, women, and girls, and employment in agriculture includes work not only on farms, but also on osier land, woodland, orchards, market gardens, and nursery grounds.

The minimum rates when fixed will be legally payable as explained below.

Constitution of the Wages Board.—The Wages Board will consist of three classes of persons: (*a*) "Appointed members," that is to say, persons directly appointed by the Board of Agriculture and Fisheries who are not necessarily engaged in agriculture, but are expected to form an impartial judgment as between employers' and workers' interests; (*b*) members representing employers; and (*c*) members representing workers.

The members representing employers and the members representing workers must be equal in number. The appointed members must not be greater in number than one-quarter of the total number of members of the Wages Board.

Minimum rates of wages.—It will be the duty of the Wages Board to fix minimum rates of wages for time-work for all classes of workers, and they may, if they think it necessary or expedient, also fix minimum rates of wages for piecework. These rates, whether for time-work or for piecework, may be fixed so as to apply universally to workers employed in agriculture, or they may be different for different districts, or for different classes of workers, or for

[1] The Labour Gazette, London, September, 1917, p. 314.

different kinds and conditions of employment. In the case of able-bodied men, the minimum rates fixed for time-work must be such as will secure wages which, in the opinion of the Wages Board, are equivalent to payment for an ordinary day's work at a rate of at least 25s. ($6.08) a week. This provision does not apply in the case of boys, women, and girls. In computing the wages, the value of such customary allowances as are not prohibited by law may be included in so far as the Wages Board may authorize and on a basis of value to be fixed by the Wages Board. Deductions from cash wages in respect of an allowance of intoxicating drink are illegal under the Truck Acts.

Procedure in fixing minimum rates.—Before fixing any minimum rate of wages the Wages Board must give notice of the rate which they propose to fix, and must consider any objections which may be lodged with them within one month; and when a rate has been fixed, notice of such rate must be given by the Wages Board for the information of the employers and workers affected.

Enforcement of minimum rates of wages.—When a minimum rate of wages has been fixed, any agreement for the payment or acceptance of wages at less than the minimum rate is void, and payment of wages at less than the minimum rate renders the employer liable to a fine of not more than £20 ($97.33) and to a fine not exceeding £1 ($4.87) for each day on which the offense is continued after conviction therefor, unless he proves that he did not know and could not with reasonable diligence have ascertained that the wages paid were at a rate less than the minimum rate.

In cases, however, where the Wages Board are satisfied that a worker on time-work is affected by any mental or other infirmity or physical injury which renders him incapable of earning the minimum time rate applicable, they may grant the worker a permit of exemption, and so long as any conditions prescribed by the Wages Board on the grant of the permit are complied with, the employer is not liable to penalty for paying the worker wages at less than the minimum rate.

Any worker may complain, or may authorize another person to complain, to the Wages Board that he is being paid wages at less than the minimum rate fixed by the Wages Board, and the Wages Board may, if they think fit, take proceedings on behalf of the worker, either for the recovery of the arrears of wages due to the worker or by way of prosecution of the employer.

Where a worker is employed on piecework, and a minimum time rate, but no minimum piece rate, has been fixed by the Wages Board for the work on which he is employed, the worker may complain, or may authorize another person on his behalf to complain, to the

Wages Board that the piece rate paid to him is so low that the earnings of an ordinary workman paid at such rate would be less than he would have earned for the same work at the minimum time rate applicable to the case; and the Wages Board in that case may direct the employer to pay the difference. The worker may recover from the employer summarily as a civil debt any sum which the Wages Board direct to be paid.

Officers may be appointed for the purpose of investigating complaints and otherwise securing the proper observance of the provisions of the act relating to minimum rates of wages.

District wages committees.[1]—The Wages Board may, and if required by the Board of Agriculture and Fisheries must, establish district wages committees to act for such areas as the Wages Board may determine.

It is the duty of district wages committees to recommend to the Wages Board minimum rates of wages applicable to their districts. Minimum rates of wages can only be fixed, varied, or canceled by the Wages Board itself, but no minimum rate fixed to apply to an area for which a district wages committee has been established, and no variation or cancellation of such rate can have effect in that area unless the district wages committee has either recommended the rate or its variation or cancellation or has had an opportunity of reporting thereon to the Wages Board.

Provisions of the act now in force.—Some time must necessarily elapse before the Wages Board and district committees are set up and the above provisions come into operation. In the meantime an able-bodied man employed on time-work (but no other class of worker to whom Part II of the act applies) who since the commencement of the act, viz, the 21st of August, 1917, has received payment of wages (including allowances) at a rate which, in the opinion of the court, is less than the equivalent for an ordinary day's work of 25s. ($6.08) a week, will be entitled to recover the difference from his employer as a civil debt, at any time not exceeding three months after a minimum rate applicable to his work is fixed by the Wages Board. The value of allowances in such cases will, in case of dispute, be determined by the court.

It is advisable, therefore, that employers should at once arrange to pay all able-bodied men employed in agriculture, on time-work, wages for an ordinary day's work equivalent to at least 25s. ($6.08) per week, and should provisionally agree with such workers as to the customary or reasonable value of any allowances which are reckoned

[1] Composed of an equal number of representatives of employers and workers, respectively, and also one or more impartial persons appointed by the Board of Agriculture and Fisheries.

as part payment of wages. It is illegal under the Truck Acts to reckon beer or cider or other intoxicants as allowance in part payment of wages.[1]

REGULATIONS AS TO CONSTITUTION AND PROCEEDINGS OF AGRICULTURAL WAGES BOARD.[2]

In the October issue of the British Labor Gazette it is noted that the Board of Agriculture and Fisheries has issued provisional regulations with respect to the constitution and proceedings of the Agricultural Wages Board for England and Wales, which specify that the board shall consist of 39 members, of whom seven shall be "appointed members" selected by the Board of Agriculture and Fisheries and the remainder shall be "representative members," representing employers and workmen, respectively, in equal proportion. It is also provided that the Board of Agriculture and Fisheries may, if deemed necessary for the purpose of securing the proper representation of any classes of employers or workmen, nominate additional representative members up to a number not exceeding four (of whom half must be representatives of employers and half representatives of workmen) to serve for such period, not exceeding three years, as it may determine.

The regulations provide for the retirement, at the end of one year from the date of the establishment of the Wages Board, of five members representing employers and five members representing workmen, and for the retirement of similar numbers at the end of two years. Provision is also made for vacating the seat of any "representative member" who, if representing employers, becomes a workman in agriculture, or, if representing workmen, becomes an employer in agriculture, or who fails, without reasonable cause, to attend one-half of the total number of meetings in a calendar year. If, in the opinion of the Board of Agriculture and Fisheries, any "representative member" is incapable of acting as a member of the Wages Board, the Board of Agriculture and Fisheries may determine his appointment, and he shall thereupon vacate his seat.

The term of office, according to these provisional regulations, will be two years for an "appointed member," and, subject to the abovementioned regulations as to retirement and vacation of seats and the appointment of "additional" representative members, three years for a "representative member."

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[1] In a footnote to this article the following statement is made:

"The information set out above gives a general idea of the provisions of the Corn Production Act relating to the fixing and payment of minimum rates of wages, but it must not be regarded as an authoritative interpretation of the measure, which should be consulted in any case of dispute or uncertainty."

[2] See Labour Gazette for October, 1917, p. 358.

WAGES AND COST OF LIVING IN FRANCE.

The Bulletin de la Statistique Générale de la France (July, 1917) publishes the results of an investigation of wages and cost of living in France for 1911 and 1916.

A résumé of this report, which is based on information furnished by the various councils of prudhommes, labor inspectors, and other officials, was published in the Bulletin of the Minister of Labor,[1] from which source the following data have been selected as showing the general trend of wages and prices during the period mentioned.

The data furnished by the council of prudhommes, or by mayors in localities where no such council is organized, relate to the smaller industrial establishments. They cover 52 occupations, 47 followed by male and 5 by female workers. Reports were received from 156 cities located in 80 departments, and in addition to estimates of wages they show the average amount paid by unmarried laborers for board and lodging.

The average daily wages of male employees in 38 occupations in 1916 was 5.56 francs ($1.07), as compared with 4.55 francs (87.8 cents) in 1911; wages of female employees in 7 occupations averaged 2.57 francs (49.6 cents) in 1916, as compared with 2.21 francs (42.7 cents) in 1911.

The average monthly expenditure for board and lodging by an unmarried person was 70 francs ($13.51) in 1911, and 99 francs ($19.11) in 1916. In calculating the cost of living the average yearly consumption of a Parisian workman's family of four persons has been used as a base. The quantities adopted are: 700 kilograms (1,543 pounds) of bread, 200 kilograms (441 pounds) of ham, bacon, etc., 20 kilograms (44 pounds) of butter, 20 dozen eggs, 300 liters (317 quarts) of milk, 20 kilograms (44 pounds) of cheese, 250 kilograms (551 pounds) of potatoes, 30 kilograms (66 pounds) of beans, 20 kilograms (44 pounds) of sugar, 10 kilograms (22 pounds) of oil (table), 30 liters (32 quarts) of petroleum, and 10 liters (10.5 quarts) of fuel alcohol.

Assuming that the amounts of food consumed remain unchanged and applying to the fixed quantities of different articles the prices furnished periodically by the mayors, the office of general statistics has calculated that the index numbers showing the expenditures for a working family of four persons, based on 13 principal articles of food, have increased from 1,014 in the first quarter of 1911 to 1,466 in the fourth quarter of 1916.

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[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale, August-September, 1917, pp. 353–371.

In the following table are shown average hourly and daily wages, by occupations, in Paris and in other cities, for the years 1911 and 1916, and the per cent of increase for the latter year:

AVERAGE RATES OF WAGES IN PARIS AND OTHER CITIES, 1911 AND 1916, AND PER CENT OF INCREASE, BY OCCUPATIONS.

Occupation.	Average wages in—								Per cent of increase in 1916 over 1911.			
	Paris.				Other cities.				Paris.		Other cities.	
	1911		1916		1911		1916					
	Per hour.	Per day.	Per hour.	Per day.	Per hour.	Per day.	Per hour.	Per day.	Per hour.	Per day.	Per hour.	Per day.
Males.	*Cts.*	*Dolls.*	*Cts.*	*Dolls.*	*Cts.*	*Dolls.*	*Cts.*	*Dolls.*				
Brewers	8.69	0.97	13.00	1.30	6.95	0.79	9.07	0.95	50	35	31	21
Printers and compositors	15.44	1.39	18.34	1.75	10.04	96	11.77	1.10	19	25	17	15
Binders	11.58	1.16	15.44	1.54	9.07	90	10.80	1.05	33	33	19	17
Tanners	12.55	1.25	18.34	1.83	7.72	.77	10.23	1.01	46	46	32	32
Saddlers and harness makers	12.55	1.16	12.55	1.25	8.11	.81	10.23	1.02	0	8	26	25
Shoemakers	14.48	1.45	16.41	1.64	7.33	.75	10.04	1.03	13	13	37	37
Tailors	14.48	1.45	16.41	1.64	8.49	.88	10.42	1.04	13	13	23	15
Dyers and cleaners	.....	.....	.....	.....	8.30	.81	10.42	1.01	.....	.....	25	26
Weavers	.....	.....	.....	.....	6.37	.62	7.91	.79	.....	.....	24	29
Rope makers	.....	.....	.....	.....	6.95	.69	8.49	.82	.....	.....	22	18
Wheelwrights	15.44	1.54	16.41	1.64	8.49	.85	10.42	1.04	6	6	23	23
Wood turners	.....	.....	.....	.....	9.26	.92	11.39	1.13	.....	.....	23	23
Coopers	.....	.....	.....	.....	8.69	.87	10.80	1.06	.....	.....	23	22
Cabinetmakers	17.37	1.74	18.34	1.83	9.26	.93	11.19	1.10	6	6	21	18
Upholsterers	19.30	1.83	19.30	1.93	9.84	.97	11.77	1.17	0	5	20	20
Sawyers	.....	.....	.....	.....	8.88	.87	11.00	1.04	.....	.....	23	22
Carpenters	19.30	1.74	21.71	1.95	9.84	.99	12.16	1.18	12.5	11	23	19
Joiners	15.44	1.54	19.30	1.93	9.07	.91	10.80	1.08	25	25	19	19
Coppersmiths	16.41	1.64	18.34	1.83	10.04	1.00	11.97	1.19	12	12	19	19
Tinsmiths	15.44	1.54	15.44	1.54	9.07	.90	11.19	1.11	0	0	23	24
Plumbers	.....	1.54	.....	1.93	9.46	.93	11.39	1.14	.....	25	20	23
Blacksmiths	19.30	1.93	19.30	1.93	9.46	.94	11.77	1.18	0	0	25	27
Farriers	18.34	1.83	16.41	1.64	8.49	.85	11.00	1.08	[1] 10	[1] 10	30	30
Stove makers	.....	.....	.....	.....	9.65	.97	11.39	1.12	.....	.....	18	16
Locksmiths	17.37	1.54	20.27	1.82	8.88	.88	11.77	1.09	11	11	32	24
Metal turners	15.92	1.59	20.27	2.03	10.23	1.03	12.74	1.27	27	27	24	23
Watch and clock makers	13.51	1.35	21.23	2.12	10.62	1.02	12.55	1.24	57	57	18	21
Quarrymen	.....	.....	.....	.....	8.11	.80	10.62	1.02	.....	.....	31	28
Stone dressers, etc	19.30	1.74	17.37	1.56	10.23	.98	12.35	1.19	[1] 10	[1] 10	21	22
Masons	18.34	1.65	20.75	1.37	9.46	.92	11.71	1.13	13	13	24	22
Excavators	15.44	1.47	18.82	1.69	7.53	.72	9.84	.96	22	16	31	32
Roofers	.....	1.54	.....	1.74	10.04	.97	11.97	1.17	.....	12	19	20
Painters, buildings	16.41	1.39	16.41	1.48	10.42	.91	12.55	1.08	0	6	20	20
Sculptors	.....	2.08	.....	2.41	12.55	1.18	14.48	1.44	.....	16	15	21
Brickmakers	.....	.....	.....	.....	7.91	.75	9.84	.93	.....	.....	24	26
Potters	11.58	1.16	14.48	1.35	8.30	.82	9.65	.93	25	17	16	14
Glaziers	17.37	1.48	19.30	1.74	9.46	.91	11.39	1.08	11	18	20	19
Day hands	9.65	.97	10.62	1.06	6.37	.63	8.49	.82	10	10	34	30
Average	15.44	1.50	17.56	1.73	8.88	.88	11.00	1.07	14	15	24	22
Females.												
Ironers	7.72	.77	9.65	.97	4.25	.41	5.02	.50	25	25	18	23
Seamstresses	6.76	.68	8.69	.87	4.25	.43	5.21	.51	29	29	23	18
Laundresses	5.79	.58	8.69	.87	4.05	.40	4.83	.48	50	50	19	21
Vest makers	9.65	.97	9.65	.97	4.63	.46	5.40	.51	0	0	17	18
Lace makers	.....	.....	.....	.....	4.25	.39	5.02	.46	.....	.....	18	18
Embroiderers	.....	.....	.....	.....	4.63	.44	5.40	.46	.....	.....	17	5
Dressmakers	.....	.....	.....	.....	4.63	.47	5.40	.52	.....	.....	17	12
Average	7.53	.75	9.17	.92	4.44	.43	5.21	.50	22	22	17	16

[1] Decrease.

The questionnaires were not intended to cover all occupations. In many cases rates of wages in occupations other than those called for

are furnished. These show a much greater range in wages than is shown in the foregoing table, varying in different localities from no change in the case of workers in spices, umbrella makers, weavers, spectacle makers, velvet dyers, etc., to increases of 100 per cent for glove makers, 122 per cent for shoemakers, males, and 233 per cent for shoemakers, females. In 3 instances decreased wages are reported as follows: The daily wages of pipe makers decreased from 7.50 francs ($1.45) in 1911 to 5 francs (96.5 cents) in 1916, of diamond workers from 10 francs ($1.93) to 5 francs (96.5 cents), and of fasteners from 3.37 francs (65 cents) to 2.77 francs (53.5 cents).

In addition to these estimates reports covering the years 1913 and 1916 have been received from the labor inspectors. These relate to the daily wages in larger industrial establishments, cover 30 occupations—22 known as men's, and 8 as women's—and are based on a 10-hour day. Some are the prevailing wages in certain cities while others are for a department or a district. The table which follows shows these data by occupations:

AVERAGE DAILY WAGES OF LABORERS AND SKILLED WORKERS, BY SEX AND OCCUPATION, 1913 AND 1916.

Occupation.	Wages in—		Relative wage in 1916 (1913=100).
	1913	1916	
Men, laborers.			
Metal trades	$0.79	$1.04	132
Paper and chemicals	.78	1.01	130
Building	.81	1.08	134
Woodworking	.79	1.02	129
Textiles	.70	.86	122
Leather	.82	1.18	145
Food preparations	.69	.95	137
Sundries	.88	1.14	130
Not reported	.73	.94	129
Average	.78	1.02	132
Men, skilled.			
Millers, grist	.97	1.19	122
Weavers	.79	.97	122
Tailors, cutters	1.24	1.49	120
Cutters, shoes	1.11	1.36	123
Harness makers	1.03	1.28	125
Saddlers	1.05	1.29	123
Wheelwrights	1.05	1.31	124
Sawyers, mechanical	1.06	1.30	122
Turners, wood	1.17	1.39	119
Hammersmiths	1.12	1.36	121
Stampers	1.44	1.79	124
Strikers	.86	1.08	125
Blacksmiths	1.17	1.44	123
Firemen, large boilers	.94	1.16	123
Engineers, steam	.98	1.19	121
Electricians, installers	1.17	1.46	125
Fitters, mechanics	1.16	1.49	128
Turners, rough	1.06	1.42	134
Men, skilled—Concluded.			
Turners, finishers	1.27	1.66	131
Borers	.92	1.22	133
Packers	.89	1.09	122
Average	1.06	1.32	125
Women, laborers.			
Not reported	.45	.67	150
Metal trades	.46	.74	159
Paper and chemicals	.41	.48	117
Woodworking	.53	.72	137
Textiles	.48	.62	129
Leather	.52	.63	122
Food preparations	.41	.58	141
Other	.45	.62	136
Average	.46	.63	137
Women, skilled.			
Spinners	.56	.69	123
Weavers	.60	.72	120
Cutters, ready-made garments	.53	.72	134
Shoemaking	.62	.83	134
Turners	.69	1.11	162
Borers	.55	.80	145
Examiners of parts	.60	.85	142
Average	.58	.80	138

If the prices of commodities and the rate of wages before the war be taken as a base, or 100, the index numbers in the following statement will show the relative increase in wages and in cost of living in 1916:

Relative wages of men based on report of—	
Councils of prudhommes (average for 1911=100)	122
Labor inspectors (average for 1913=100)	125
Relative wages of women based on report of—	
Councils of prudhommes (average for 1911=100)	116
Labor inspectors (average for 1913=100)	138
Relative cost of living (average for 1911=100)—	
Board (by month)	141
Household necessities (13 articles)	145

While the cost of living has increased in a proportion relatively greater than the increase shown in wages, the increasing number of members of the family, especially women and young girls, finding employment in industry increases the family income, even though individual wages remain stationary. For this reason the relation between salary and the cost of living is more exactly fixed when the income of the working family instead of the individual salary is considered.

The following data are reported for persons engaged in agricultural labor: Since 1914 daily wages have increased from 3.43 francs (66.2 cents) to 5.15 francs (99.4 cents) when board is not furnished, and from 2.33 francs (45 cents) to 3.52 francs (67.9 cents) when board is furnished, an increase of 50 and 58 per cent, respectively.

Wages paid mine laborers, 1914 and 1916, as reported by the magistrates, show an increase of approximately 18 per cent, but since the wages for 1914 are based upon the normal 8-hour day and those for 1916 are computed upon a 9 to 10 hour day, the estimates for 1916 do not show the workmen's actual gains.

The following table shows average daily wages in various mining districts, 1914 and 1916, and per cent of increase in the latter year:

AVERAGE DAILY WAGES IN VARIOUS MINING DISTRICTS, 1914 AND 1916, AND PER CENT OF INCREASE.

District and mine.	Daily wages in—		Per cent increase, 1916 over 1914.
	1914	1916	
Ardèche:			
Bannes	$0.84	$1.00	19
Neigles-Prades	.70	.84	19
Aveyron:			
Decazeville—			
Below ground	1.09	[1] 1.18	6
Above ground	.91	[1] 1.03	13
Campagnac—			
Below ground	1.09	[1] 1.19	9
Above ground	.90	[1] .98	9
Allier:			
Les Ferrières	.88	1.11	27
Buxières	.76	.95	25
Commentry	.77	1.06	37
Bezenet	.82	1.06	29
Saint-Hilaire	.74	.95	28
Noyant	.92	1.11	23
Gard:			
Bessèges—			
Below ground	1.18	1.33	13
Above ground	.79	.91	15
Rochebelle—			
Below ground	1.06	1.29	22
Above ground	.74	.87	18
Trélys—			
Below ground	1.08	1.27	17
Above ground	.76	.87	15
Portes—			
Below ground	1.05	1.17	11
Above ground	.68	.78	14
Hérault:			
Graissesac—			
Below ground	$1.00	$1.30	30
All workers	.82	1.10	34
Loire	1.08	1.22	13
Haute-Loire:			
La taupe	.89	1.04	17
Grosménil	.88	1.02	15
Isère:			
La Mure	1.09	1.32	20
Maine-et-Loire:			
Iron mining—			
Below ground	.97	1.16	20
Above ground	.87	.83	(2)
Gold mining—			
Below ground	.92	1.17	26
Above ground	.65	.80	23
Slate quarry, d'Angers—			
Below ground	1.06	1.14	7
Above ground	.75	.90	19
Slate quarry, d'Anjou—			
Below ground	.90	1.11	23
Above ground	.82	1.01	23
Nievre:			
Decize	.86	1.04	20
All mines reported	.90	1.06	18

[1] Not including monthly allowances of 10 fr. ($1.93) to men, 8 fr. ($1.54) to women, and 15 fr. ($2.90) to children; one-eighth increase in wages, and other benefits for overtime work.
[2] Decrease of 4.7 per cent.

Average daily wages (based on those reported for the principal cities of various departments) have been calculated for the purpose of showing the general advance in men's wages. Only data applicable to both years, 1911 and 1916, have been used. In the table following are shown average daily wages for men, monthly prices of board, lodging, and food, for single persons, relative cost based upon prices of 13 articles of household necessity, and relative wages in small and large industries in 25 principal cities.

WAGES AND PRICE OF BOARD AND FOOD IN 25 PRINCIPAL CITIES, 1911 AND 1916.

City.	Customary daily wages (males).		Customary price of board (per month).		Index number of retail prices (13 articles of food).		Relative prices, 1916 (1911=100).		Relative wages, 1916 (1911=100).	
	1911	1916	1911	1916	1911	1916	Board.	Food.	Small industries.	Large industries.
Epinal	$0.87	$1.25	$13.51	$15.83	1,051	.....	117	.....	143	138
Rennes	.95	1.32	13.70	19.30	989	1,285	141	130	140	118
Bourges	.95	1.30	13.90	26.06	998	1,495	187	149	137	130
Saint-Etienne	1.06	1.37	15.83	26.44	1,178	1,540	155	131	130	117
Besancon	.96	1.22	15.44	22.20	1,020	1,438	144	141	127	132
Rouen	1.13	1.43	13.51	28.95	1,063	.....	214	.....	127	129
Evreux	.91	1.13	17.37	20.27	1.019	1,529	117	150	124	116
Limoges	.87	1.07	14.48	21.23	1,040	1,450	147	139	123	141
Grenoble	1.03	1.26	14.96	21.62	967	1,515	144	157	122	117
Angouleme	.89	1.07	13.03	16.41	957	1,470	126	154	121	115
Saint-Brieuc	.80	.97	12.93	15.44	1,026	1,357	119	132	120	113
Le Puy	.78	.93	14.48	21.71	985	1,422	150	144	120	127
Lyon	1.20	1.44	17.37	27.99	1,076	1,727	161	161	119	127
Nantes	1.11	1.32	15.44	21.23	910	1,567	137	172	119	119
Poitiers	.91	1.08	15.44	15.44	1,188	1,489	100	125	118	132
Paris	1.50	1.73	.....	26.06	.....	.....	.....	.....	115	128
Macon	.94	1.09	14.48	19.30	902	1,405	133	156	115	115
Chambery	.93	1.05	11.58	14.48	912	1,434	125	157	114	127
Valence	.96	1.06	12.06	17.18	991	1,545	128	156	111	134
Orleans	.97	1.06	14.48	22.20	990	1,487	153	150	109	133
Dunkerque	1.02	1.09	14.48	20.27	1,117	1,606	140	144	107	114
Blois	.99	1.03	13.51	23.16	961	.....	171	.....	104	129
Chateauroux	.91	.95	11.58	25.09	969	1,371	158	141	104	106
Marseille	1.14	1.17	14.48	24.13	1,119	1,652	167	148	102	121
Bar-le-Duc	1.06	1.09	15.15	.....	1,107	1,575	.....	142	103	109

Hourly wages of female garment workers (all occupations combined), working at home, are reported according to the rates fixed by the wage committees established by the law of July 10, 1915.

The difference in rates in the various districts is considerable. In Cantal the average hourly rate is only 0.18 franc (3.5 cents) while in Seine-at-Marne where the highest rate is reported it reaches 0.46 franc (8.8 cents).

INCREASED PAY FOR CIVIL EMPLOYEES OF FRANCE.[1]

As a means of meeting the increased cost of living, a law was passed, April 7, 1917, which granted an increase in the salaries of the civil employees of France and which provided for further allowances to cover family expenses by making specific increases according to the number of children living with such employees and dependent upon them.

In accordance with the provisions of this law a decree was signed, May 3, 1917, regulating the granting of such increases and allowances.

The law and the decree were subsequently modified,[2] and further increases were granted. As the result of an examination of the law

[1] Journal Officiel de la République Française, Aug. 19, 1917, p. 6574.
[2] Law of Apr. 7, 1917.

of August 4, 1917, the following measures were taken to complete the temporary provisions made for the purpose of enabling civil employees of the State to meet present conditions of the high cost of living. The decree states:

ARTICLE 1. Beginning with July 1, 1917, temporary supplements to salaries not subject to any deductions for pension funds, shall be granted under the conditions herein provided, to all civil employees of the State who belong to the classes mentioned, and who are paid monthly. These employees are as follows:

1. Officials, clerks (*agents*), assistant clerks (*sous-agents*) definitely employed or serving probationary periods, and supernumeraries subject to the provisions of the laws of April 11 and 18, 1831; June 9, 1853, and April 8, 1910 (Article 85).

2. Clerks (*agents*), assistant clerks (*sous-agents*), and employees who are permanently employed in the service of the State, but who belong to a class organized and paid according to a fixed scale.

In no case shall this decree be applicable to (1) clerks under 16 years of age; (2) employees serving ad interim and persons temporarily employed to fill vacancies during hostilities; (3) employees whose public employment partakes of an accessory nature; (4) employees who during their term of employment are permitted to engage in an occupation, in commerce, or in industry.

ART. 2. Yearly increases in salaries shall be fixed as follows: 540 francs [$104.22] for those employees whose annual salaries do not exceed 3,600 francs [$694.80]; and 360 francs [$69.48] for those receiving 3,600 francs and not over 5,000 francs [$965] per annum. For those receiving between 3,600 francs and 3,780 francs [$729.54] the increase shall be such as will make the annual income at least 4,180 francs [$806.74].

Salaries between 5,000 francs [$965] and 5,360 francs [$1,034.48] shall be increased but not to exceed the larger amount.

ART. 3. In determining the amount of salary received consideration shall be given to the gratuities, allowances, perquisites, and other compensation of a supplementary character, allowed by the State, provinces, communes, colonies, and public establishments, as well as to all wages or salaries paid by private parties as a regular income from employment. In all cases allowances for dwellings (*logement*) shall be computed as a part of the salary received.

In cases in which salaries or commissions are variable the income from these sources for the year immediately preceding and for the employee's actual position for that time shall be taken as the base. Deduction shall be made for premiums retained to establish pensions. Commissions, however, shall be exempt in so far as they are subject to deductions for civil pensions. If the employee is furnished free lodgings their value must be considered as a portion of his salary.

ART. 4. Any official, clerk, or assistant clerk receiving a salary not exceeding 5,000 francs [$965] and having minors under 16 years of age, or incapable of work because of infirmities, dependent upon him shall be entitled to further annual allowances as follows: 100 francs [$19.30] for each of the first two children; and 200 francs [$38.60] for each child after the second. A person receiving over 5,000 francs [$965] shall receive only such an allowance as will make his annual income equal to that of a man receiving 5,000 francs [$965] and having equal family charges.

Dependents shall be defined as: 1. Children whose care is incumbent upon the parent according to the civil code; 2. Orphaned brothers, sisters, nephews,

or nieces living with the employee; 3. Children of either parent by a former marriage living with the employee. Children in a State institution who are beneficiaries of a fund or other equivalent benefit shall in no case be considered as dependents. This restriction shall not apply to children who have received scholarships only.

When each parent claims the allowances for family charges, they shall be payable only if the larger of the two salaries does not exceed 5,000 francs [$965], and only one allowance shall be made for each child.

On the first day of each month the allowances for family charges shall be payable for the preceding month.

ART. 5. Temporary and auxiliary clerks, not included in the above provisions, who entered the service before the war, and who have been employed in the same department for five consecutive years, shall be granted annual increases as provided by the decree of May 3, 1917, of 120 francs [$23.16] for unmarried persons, and 180 francs [$34.74] for married persons, or for widowed, divorced, or separated persons having children or other dependents under their charge.

They shall also be entitled to compensation for dependents equal to that herein provided for permanent employees, but only under the following conditions: (1) That their salaries do not exceed 5,000 francs [$965]; and (2) that they do not belong to the excepted class (art. 1).

ART. 6. Special regulations made by each department of the Government shall provide equal increases and allowances for day, job, and piece workers.

Employees attached to services whose administrative officers, taking into account the high cost of living, have, since the outbreak of hostilities, undertaken the betterment of the scale of wages shall be excluded from these benefits.

Persons paid monthly at a day rate, for every day in the year, including Sundays and holidays, shall be considered as monthly employees.

ART. 7. Officials, clerks, and laborers mobilized, and allowed to receive more than one salary (law of Aug. 5, 1914), shall have a right to equal benefits and under similar conditions to temporary allowances, if married, widowed, or divorced, with children legally dependent upon them.

ART. 8. Officials, clerks, and laborers of French nationality paid from the State appropriation, in the foreign or in the colonial service, or in a protectorate shall be allowed temporary increases to be determined by the proper minister and approved by the minister of finance.

FARM LABORERS' WAGES IN HOLLAND.

Relatively very large compensation was paid farm laborers in the Amsterdam consular district during the past harvest season, according to information furnished by the American consul at Amsterdam, under date of October 10. For cutting (with a sickle) and binding wheat or oats, the laborer received per hectare (2.47 acres) 35 to 40 florins ($14.07 to $16.08). Twenty years ago, it is said, 6 to 7 florins ($2.41 to $2.81) was considered good pay for similar work. During the recent harvest an energetic farm laborer could make as much as 8 florins ($3.22) per day, and a man, his wife, and two grown children could earn about 125 florins ($50.25) per week. Wages in other industries, the consul states, have advanced in much less degree than

on the farms, the reason being that other large industries have not made, on the whole, so great an increase of profits on their products as the farmers. "Formerly the Dutch farmer made only a small profit and could afford to pay only corresponding wages. Since the war began his profit has so greatly increased that the present rate of wages is relatively no more to him than the old-time rate, if as much."

WAGES IN THE DOMINICAN REPUBLIC.

The American consul at Puerta Plata, Dominican Republic, states that while there is no fixed scale of wages and no trade-unions in the Republic, there has been considerable advance in the amount paid for different kinds of labor owing to the increased cost of living and the scarcity of workers, most of whom are natives, except during the sugar season, when thousands are brought in from the neighboring islands. The average rates of wages reported by the American consul under date of November 5 were as follows: Day laborers, 60 cents; dock laborers, 80 cents; farm laborers, 50 cents; foremen, $1.25 to $2; masons, $2; blacksmiths, $1.50 to $2; carpenters, $1.50 to $2; mechanics, $1.50 to $3; firemen, $1.50 to $2; locomotive engineers, $2.50 to $4. Tailors and shoemakers are usually paid by the piece, their earnings ranging from $2 to $3 per day. The few factory operatives that are there earn from 50 cents to $2 per day, depending on their skill and the class of work performed.

EIGHT-HOUR WORKING-DAY BY AGREEMENT IN FINLAND.[1]

The second number of the current volume of Arbetsstatistisk Tidskrift (the journal of the Finnish Labor Department) contains information with regard to the recent introduction of an eight-hour working-day in various occupations in Finland. Immediately after the revolution the senate passed a resolution introducing an eight-hour working-day in the workshops of the State railways and in the State printing works. Agreements for a like object have been arrived at between employers' associations and trade-unions in the metal, printing, sawmilling, paper and pulp making, and glass industries. Various private employers have also granted a similar working-day to their workpeople; and several municipalities, including Helsingfors, have made the same concession. As the result of this movement it is believed that in the near future the reduced working-day will be operative in most of the industries and in the more important handicrafts of Finland.

[1] The Labour Gazette, London, November, 1917, p. 403.

One of the most important agreements was that arrived at in the metal trade, under which the working hours per week may not exceed 47, the daily hours being eight on ordinary days, and seven on Saturdays and the day before a public holiday, including the 1st of May, which is also to be a holiday. The workpeople undertake to perform overtime work, for which extra payment is to be made at the rate of 50 per cent above ordinary pay for the first two hours, and 100 per cent for subsequent time and for hours worked on Sundays. The pay for work by the job or day is not to be reduced in consequence of the shortened working-day. Where work is done in one shift, this must fall between the hours of 7 a. m. and 5 p. m., one hour interval for meals being permitted.

Two bills relating to the introduction of an eight-hour working-day in industry and in agriculture, respectively, have been put forward by the Social Democratic Party, and are now being considered by the legislature.

UNION SCALE OF WAGES AND HOURS OF LABOR.

The union scales of wages and hours of labor for 101 of the principal trades in 48 of the leading cities in the United States prevailing in May, 1916, are published in Bulletin No. 214, just issued by this bureau. The scales shown are those of the baking, brewing, building, freight handling, stone, metal, millwork, printing, soft drink, and teaming trades.

Reports of weekly wages were received for 99 trades. In 80 of these trades the average rate of wages, taken collectively, was higher on May 15, 1916, than on May 1, 1915. In 19 trades there was no change, and in no trade was the average rate lower. The bakery trades, collectively, received an advance of 2 per cent. All but one of the 17 brewing trades listed in this report received an increase ranging from 1 to 8 per cent. Thirty of the 37 building trades listed received an increase of from 1 to 11 per cent. Chauffeurs, teamsters, and drivers received an increase of 3 per cent. Freight handlers received the greatest increase in any one occupation—14 per cent. Granite cutters had an increase of 4 per cent. All of the metal trades gained an increase of from 3 to 10 per cent. Millwork painters (hardwood finishers) received an increase of 12 per cent. In book and job printing 9 of the 11 trades received an increase, in no case, however, above 3 per cent. In the soft-drink establishment group the increase was from 1 to 5 per cent in the several occupations.

Considering the rates of wages per hour as distinguished from rates per week of the 101 trades, 83 showed an increase, 18 showed no

change, and for none was the rate lower. Taken collectively, rates per hour in 1916 were 4 per cent higher than in 1915, 5 per cent higher than in 1914, 14 per cent higher than in 1910, and 19 per cent higher than in 1907.

The highest scales per hour paid in May, 1916, in a few of the principal trades were as follows: Bricklayers, 87.5 cents in Dallas, Houston, Denver, and San Francisco; carpenters, 70 cents in Chicago; portable and hoisting engineers, 75 cents in Chicago, Detroit, Newark, New York, St. Louis, and San Francisco; hod carriers, 50 cents in Portland, Oreg., St. Louis, Salt Lake City, San Francisco, and Spokane; inside wiremen, 75 cents in Chicago and St. Louis; painters, 70 cents in Chicago; plasterers, 87.5 cents in Dallas, Houston, and San Francisco; plumbers and gas fitters, 75 cents in Birmingham, Chicago, Dallas, Houston, Kansas City, Portland, Oreg., St. Louis, Salt Lake City, San Francisco, and Seattle; structural-iron workers, 75 cents in San Francisco; granite cutters, 75 cents in Boston; stone cutters, 70 cents in Portland, San Francisco, Seattle, and Spokane; compositors on book and job work, 54.2 cents in Denver and Salt Lake City, and on newspapers printed in English (daywork), 75 cents in Seattle; linotype operators on book and job work and on newspapers printed in English (daywork), 75 cents in Seattle.

As to changes in hours of labor, 31 trades showed a reduction of hours between 1915 and 1916, and 69 trades had no change. Only one trade, machinist-operators in book and job printing, had an increase in working hours in the year.

The hours of labor in the metal trades range from 44 to 63 per week, 54 being the predominant number. The printing trades in the book and job and newspaper offices in nearly all of the cities covered have an 8-hour day or less.

The bulletin further shows by index numbers (percentages) the relative changes between 1907 and 1916 in union wages and hours of labor as compared with retail prices of food and in the purchasing power of wages as measured by food.

LABOR STANDARDS.

SUSPENSION OF EIGHT-HOUR LAW ON CERTAIN GOVERNMENT CONTRACTS IN WASHINGTON, D. C.

Under date of December 6, 1917, the following executive order was issued by the President:[1]

In order to effect the more expeditious construction of the extensions, alterations, etc., of buildings numbered 500 to 508, Fourteenth Street N. W., Washington, D. C., the early completion of said buildings for the use of activities of the Treasury Department engaged on work in connection with war measures creating a national emergency, and by virtue of the provisions of the act of Congress approved March 4, 1917, entitled "An act making provisions for the naval service for the fiscal year ending June 30, 1918, and for other purposes" (39 Stat. U. S., 1192), whereby it is provided, "That in case of national emergency the President is authorized to suspend provisions of law prohibiting more than eight hours' labor in any one day of persons engaged upon work covered by contracts with the United States: *Provided further*, That the wages of persons employed upon such contracts shall be computed on a basic day rate of eight hours' work, with overtime-rates to be paid for at not less than time and one-half for all hours' work in excess of eight hours," I do hereby suspend the provisions of law prohibiting more than eight hours of labor in any one day by persons engaged in the extension, alterations, etc., of the above-mentioned buildings belonging to the Government in the block on the west side of Fourteenth Street N. W., between E Street and Pennsylvania Avenue N. W., Washington, D. C. This order will take effect from and after this date.

THE UNITED STATES SHIPPING BOARD AND LABOR STANDARDS.

The output of ships from American shipyards depends more upon a sufficient supply of labor and the continuous employment of that labor than upon any other factor, according to Vice Chairman Stevens of the United States Shipping Board.[2] To secure that supply and continuous employment of labor the Shipping Board has accepted two definite policies.

In the first place the board has established free schools to teach navigation to sailors, oilers, etc., and to train marine engineers. These schools, beginning in the ports of New England, are now

[1] Official Bulletin, Dec. 7, 1917.

[2] The Nation's Business, Washington, D. C., 1917. Vol. 5, No. 10 (October), pp. 57–59.

located in all the important ports of the east, south, and west coasts. At the present time over 600 men are learning navigation in these free schools. Already there have been more than a thousand graduates, nearly all of whom have been placed on shipboard.

In the second place, the Shipping Board will urge no lowering of the existing standards of labor. These are Mr. Stevens's words on that point:

"Every provision of law which the National Government has passed for the better protection of the workers I believe ought to stand, unless it is obvious to everybody that it is a serious menace and a serious obstacle to the efficiency of labor. This is brought particularly home to the Shipping Board because a good many men engaged in the shipping business have urged the board to recommend to Congress the suspension of the so-called LaFollette Seamen's Act during this war. Let me say right here, with emphasis, that the Shipping Board does not propose to recommend to Congress the suspension of any act which the American people have passed for the better protection of the safety and the welfare of sailors on the seas."

WOMEN IN INDUSTRY.

EMPLOYMENT AND LIVING CONDITIONS OF WOMEN IN CALIFORNIA.

The second biennial report of the California Industrial Welfare Commission, for 1915 and 1916,[1] is devoted largely to studies of the cost of living, of the employment of women and minors in the garment trades and in the laundry industry, to a report on the canning industry, and to a statement of the apprenticeship problem, including an outline of a policy concerning "learners" in industry. It is stated in the introduction that during the biennium the work of the welfare commission had been concentrated on the problem of securing a minimum wage and fixing maximum hours for 20,000 women workers in the canning industry, which had been exempt from all regulative legislation, resulting in excessive hours of labor in many cases. In February, 1916, the commission issued orders fixing minimum wages, hours of labor, and sanitary conditions for women and minors in this industry, and a statement of these rates appears in the present report. It may be said in this connection, however, that these orders have been superseded by new minimum wage rates effective June 16, 1917, and noted in the MONTHLY REVIEW for July, 1917, pages 57 and 58.[2]

The data on the cost of living is largely a reprint from the first biennial report, in which tables were presented showing the results of a study of this question in San Francisco, Los Angeles, Sacramento, Oakland, and San Diego. From the schedules gathered at that time an estimate of the annual amount actually needed by a woman worker to maintain herself in decency and with some degree of comfort was made, and with this estimate before it the commission early in 1916 established the minimum-wage rates to which

[1] California. Second biennial report of the Industrial Welfare Commission, 1915–16. Sacramento, 1917. 276 pp. Illustrated.

[2] Further orders covering the fish-canning industry and the laundry industry, effective on January 10 and 15, 1918, respectively, appear on pp. 119 and 120 of this issue of the MONTHLY REVIEW.

reference has been made. This estimate, made in 1914, is reproduced in the report under review, and somewhat abridged is as follows:

Board and room	$300.00
Clothing, etc	112.25
Carfare	31.20
Sundries (toilet)	10.00
Medical and dental	20.00
Vacation and amusement	15.00
Laundry	12.00
Total	500.45
Average per week	9.63

In the study of the employment of women and minors in the garment trades in California, which "give employment to more women (approximately 3,000) than any other branch of manufacture in the State save the canning industry," attention was centered on three lines—namely, shirts and workingmen's garments; ladies' cloaks, suits, and skirts; and men's custom tailoring. Emphasis was placed on the rates of pay and earnings of women and children, since hours of labor, matters of sanitation, toilet rooms, etc., had been regulated by statute or by rules of local boards of health. The report first takes up the employment of 1,781 women and children in shirt, overalls, and kindred manufactures, giving tables showing the average output and earnings per year of piece-rate workers and describing the processes involved. Although employers, when asked what an average operator in their factory should earn, almost universally replied 25 cents per hour, the tables apparently indicate that a large number of the workers did not earn even 20 cents per hour on most of the work done. Thus, of 656 women employed steadily on one part of the garment 396, or 60 per cent, were working on fronts, cuffs, and sleeve openings or making and putting on collars, which processes were found quite generally to yield the operatives a rate of less than 20 cents per hour. Average earnings ranged from 5.2 cents per hour to 52.2 cents per hour, depending on the kind of work done. Of 214 time workers it was found that 30.4 per cent were rated at under $9 per week, while 51 per cent were rated at under $10. The average was $10.54 per week. Almost all the women, as well as the employers, indicated a preference for the piece-rate system of payment. The piece-rate earnings of beginners in this industry indicate that it takes 32 weeks before 20 cents an hour can be earned on overalls, and 42 weeks before the same amount can be made on shirts by the average girl, as the industry is now organized.

The investigation into the employment of women and children in the men's ready-made and custom-made clothing industry embraced the three cities of Los Angeles, Oakland, and San Francisco, cover-

ing 156 establishments, 85 of which employed 582[1] women. Of this number 458, or 78.7 per cent, were time-rate workers and 124, or 21.3 per cent, were piece-rate workers. Tables presented in the report show that 63.2 per cent of the 288 time-workers for whom information was obtained on this subject received less than $9 per week, while 73.6 per cent received less than $10; and that of the 56 piece-rate workers reporting, 33.9 per cent received less than $9 and 60.7 per cent less than $10 per week. The average weekly earnings for all workers was $9.31. Approximately one-fourth of the women reporting worked the full 52 weeks in the year; 54.6 per cent worked less than 25 weeks during the year.

In the cloak, suit, and skirt industry, 22 establishments in Los Angeles and San Francisco were scheduled, 16 covering the entire year ending October 1, 1915, and 6 covering only the month of October. The method of payment and rates of pay were obtained for 452 women. Approximately 90 per cent of the workers were paid time rates. In these cities it was found that of 403 workers 39.2 per cent were rated at less than $9 per week, while the actual earnings of 69.7 per cent, based on reports for 430 workers, fell below that amount. Approximately 30 per cent of the workers in the first group were rated at $12 or more per week, while only 10.8 per cent in the last group earned $12 or more per week. The average weekly rate was found to be $10.06 and the average weekly earnings $8.79.

The report states that in Los Angeles the rates of pay, earnings, weeks employed, and hours were all better in ladies' custom tailoring in 1914–1915 than in the cloak and suit industry in the same city.

In the investigation of the laundries of the State establishments employing both men and women were covered in the cities of San Francisco, Los Angeles, Oakland, Stockton, Fresno, San Jose, Pasadena, Colton, Riverside, and San Bernardino. Transcripts of pay rolls were taken during the four weeks of January, 1916, including rates of pay, occupations, number of hours worked, and actual weekly earnings. Information was obtained for 4,328 women and 1,686 men, a total estimated at more than 50 per cent of the laundry workers in the State. The report calls attention to the rather large amount of shifting within the industry, and also the comparatively low percentage of employees who have been in the work for less than one year, ranging from 2.8 per cent in San Francisco to 38 per cent in Los Angeles. This shifting, it is suggested, also varies by occupations, the highly skilled occupations such as shirt press operators, body ironers, and forewomen showing a very low percentage.

[1] This includes 344 women employed during one year in 19 establishments and 238 women employed in October, 1915, in the 66 establishments having no back records.

Taking up the matter of rates of pay and actual earnings, it is stated that of the 4,328 women employed in the industry, 3,720 were paid on a time or bonus basis. The following table shows the per cent of those receiving each classified rate of pay and earning each classified weekly amount in the several cities included in the investigation:

PER CENT OF LAUNDRY WORKERS ON TIME-RATE BASIS RECEIVING EACH CLASSIFIED WEEKLY RATE OF PAY AND EARNING EACH CLASSIFIED WEEKLY AMOUNT IN CERTAIN CALIFORNIA CITIES.

City.	Number of workers.	Weekly rate of pay.				Actual weekly earnings.				
		Under $8	$8 to $8.99	$9 to $9.99	$10 and over.	Under $8	$8 to $8.99	$9 to $9.99	$10 and over.	Average.
San Francisco	1,253	0.2	34.1	21.1	44.6	14.2	32.9	17.4	35.5	$9.89
Los Angeles	1,663	53.4	15.8	15.3	15.5	[1] 61.5	[1] 15.7	[1] 9.4	[1] 13.4	7.78
Oakland	504	17.7	34.7	20.0	27.6	[2] 49.7	[2] 18.0	[2] 9.9	[2] 22.4	8.38
Fresno, Stockton, San Jose	272	4.4	18.8	34.2	42.6	[3] 29.5	[3] 26.1	[3] 23.9	[3] 20.5	8.94
Pasadena	139	18.7	42.5	16.6	22.2	[4] 37.1	[4] 27.2	[4] 16.1	[4] 19.6	8.47
Colton, Riverside, San Bernardino	109	67.9	4.6	14.7	12.8	[5] 73.4	[5] 7.5	[5] 10.8	[5] 8.3	7.05
All cities	3,940	27.8	24.9	18.9	28.4	[6] 43.8	[6] 22.0	[6] 13.0	[6] 21.2	8.55

[1] Based on 322 piece-rate workers in addition to the 1,663 shown in the first column.
[2] Based on 9 piece-rate workers in addition to the 504 shown in the first column.
[3] Based on 5 piece-rate workers in addition to the 272 shown in the first column.
[4] Based on 41 piece-rate workers in addition to the 139 shown in the first column.
[5] Based on 11 piece-rate workers in addition to the 109 shown in the first column.
[6] Based on 388 piece-rate workers in addition to the 3,940 shown in the first column.

From this table it will be seen that the average weekly earnings in all cities was $8.55, and that 27.8 per cent of the workers were rated at less than $8 per week, 43.8 per cent actually earning less than that amount.

The average weekly hours worked is shown to be 44.5 for all women employed on a time basis; 64.8 per cent worked between 44 and 48 hours per week.

A table showing the rates of pay and earnings of the 1,686 men scheduled indicates, for all cities, an average of $15.05 per week as the rate and $14.89 per week as the actual earnings.

The report includes a statement of the working conditions in California canneries, and reviews the data submitted to furnish the wage board with information covering the producing power of the normal worker when engaged in putting up peaches, tomatoes, apricots, and pears in order that the board might have a basis upon which to determine equitable rates.

The apprenticeship problem as noted in the report is shown in a group of tables taken from the first biennial report of the commission. It may be gathered from these tables that in San Francisco mercantile establishments, for instance, wages seem to bear a marked relation to the ages of employees, the younger workers receiving the lower

wages; that there is not a very decided increase in wages until after two years' experience; and that nearly one-half of the workers scheduled had completed the eighth grade in school. Among San Francisco and Los Angeles laundry workers it appears that education had very little bearing on wages received.

The outline of a policy concerning "learners" in industry was submitted to the welfare commission by Meyer Bloomfield, head of Industrial Service Department, Division of Labor, U. S. Shipping Board, Emergency Fleet Corporation. In this outline emphasis is placed on the fundamental principle that the problem of the learner must be looked upon primarily as a problem of industrial management and organization rather than a purely individual problem, the solution of which depends wholly upon the brightness, ability, etc., of the employee. "The fact that a slow or unpromising learner in one plant shows, by change to another plant, ability not before revealed is proof that something more than the learner's ability frequently determines advancement in an organization." It is suggested that the nature of the conditions to be imposed by the commission may be well founded on objective standards and considerations as, for instance:

Has the employer any system of careful selection of employees?

Is there any organized opportunity for learning the trade?

What is the actual cost to the employer of teaching an employee?

What method is used to determine the learner's progress in order not to delay the payment of earned wages?

Is it cheaper to carry an indefinite number of learners who come and go than to plan permanence for rapid advancement of the learning force?

In dealing with the beginner or learner in industry provision should be made, it is stated, for the inexperienced minor learner, the experienced minor learner, the experienced adult learner, and the inexperienced adult learner. Since shop conditions and methods vary so widely as to make it impossible to frame a teaching policy that will fit all plants, "the task is to discover what is the actual learning procedure in the shops, what is a genuine learning opportunity, and to establish a less-than-minimum wage based on the opportunity or lack of it; that is, the better the opportunity in a given place the smaller the wage, the poorer the opportunity, the smaller the exemption from the regular minimum."

To put a premium on learning opportunity after defining for all employers what such opportunity involves, and to penalize lack of opportunity is to raise the standard of shop management, equalize conditions, and thus advance the best interests of both employer and employee alike.

Several schedules are suggested to be used by the commission in order to arrive at a definition of learning opportunity, these to be filled out by employers and workers, or by the commission's investigators.

MINIMUM WAGES AND MAXIMUM HOURS FOR WOMEN AND MINORS IN THE LAUNDRY AND FISH-CANNING INDUSTRIES OF CALIFORNIA.

In the month of November, 1917, the Industrial Welfare Commission of California issued two important orders establishing minimum wages and maximum hours of labor for women and minors in the laundry industry and in the fish-canning industry of that State. The essential features of these orders are as follows:

LAUNDRY INDUSTRY.

1. No person, firm, or corporation shall employ, or suffer or permit an experienced woman or minor to be employed in the laundry and dry-cleaning industry in California at a rate of wages less than $10 per week.

An experienced woman or minor is one who has been employed in the industry fifteen (15) months or more.

2. The rate of wages for learners may be less than the minimum rate prescribed for experienced workers, provided:

(a) That learners shall be paid not less than $8 per week for the first six (6) months of employment; not less than $9 per week for the second six (6) months of employment; not less than $9.50 per week for the following three (3) months of employment; and thereafter shall be considered experienced workers and shall be paid not less than the minimum rate prescribed for experienced workers.

(b) That all learners shall be registered by the commission. Application for registration as a learner shall be filed by the employer with the commission not later than two (2) weeks from the date of starting employment. Pending receipt of certificate of registration the learner shall be paid not less than the minimum rate for the wage group in which she belongs.

3. The total number of female learners in any establishment shall not exceed twenty-five (25) per cent of the total number of females employed; except that the Industrial Welfare Commission reserves to itself the right, during the continuance of the present war, to grant special permission to increase the percentage of learners in cases where actual emergency is shown.

4. Where payment of wages is made upon a commission, bonus, or piece-rate basis the weekly earnings shall not be less than the minimum time rate for the wage group in which the worker belongs.

5. All women and minors now employed in the laundry and dry-cleaning industry must be rated and paid in accordance with their period of employment as specified in section 2 (a).

6. Every person, firm, or corporation employing women or minors in the laundry and dry-cleaning industry shall keep a record of the names and addresses, the hours worked, and the amounts earned by such women and minors. Such records shall be kept in a form and manner approved by the Industrial Welfare Commission.

* * * * * * *

8. No person, firm, or corporation shall employ, or suffer or permit any woman or minor to work in the laundry and dry-cleaning industry more than eight (8) hours in any one day, or more than forty-eight (48) hours in any week.

9. A license may be issued by the commission to a woman physically disabled by age or otherwise authorizing the employment of such licensee for a wage less than the legal minimum wage; and the commission shall fix a special minimum for such a woman.

* * * * * * *

This order shall become effective sixty (60) days from the date hereof.

Dated November 15, 1917.

FISH-CANNING INDUSTRY.

1. No person, firm, or corporation shall employ or suffer or permit any woman or minor to work in the fish-canning industry in California at a rate of wages less than $10 per week of 48 hours; or if employed less than 48 hours no woman or minor shall be paid less than 25 cents per hour.

2. Where payment of wages is made upon a piece-rate, bonus, or commission basis the worker shall be paid not less than the minimum time rate for the number of hours employed.

3. No person, firm, or corporation shall employ or suffer or permit an adult woman, eighteen years of age or over, to work in the fish-canning industry more than eight hours in any one day, except in case of emergency: *Provided, however*, That the provisions of this section shall not apply to those occupations coming under the provisions of the Statutes of California, 1917, chapter 582, "An act limiting the hours of work of females," etc.

4. No person, firm, or corporation shall employ or suffer or permit an adult woman to work in the fish-canning industry in case of emergency more than eight hours in any one day at a wage less than one and one-fourth times the rate of wages paid during regular time.

5. No person, firm, or corporation shall employ or suffer or permit any woman or minor to work in the fish-canning industry more than six days in any one week except in case of emergency.

6. No person, firm, or corporation shall employ or suffer or permit any woman or minor to work in case of emergency on the seventh consecutive day in any week at a rate of wages less than one and one-half times the rate of wages paid during regular time.

Emergency work shall be all work performed by any adult woman after eight hours in any one day, or all work performed by any woman or minor on the seventh consecutive day of work in any week.

7. No person, firm, or corporation shall employ or suffer or permit a minor to work in the fish-canning industry more than eight (8) hours in any one day, or more than forty-eight (48) hours in any one week.

8. Every person, firm, or corporation employing women or minors in the fish-canning industry shall keep a record of the names and addresses, the hours worked, and the amounts earned by such women and minors. Such records shall be kept in a form and manner approved by the Industrial Welfare Commission.

* * * * * * *

10. A license may be issued by the commission to a woman physically disabled by age or otherwise authorizing the employment of such licensee for a wage less than the legal minimum wage; and the commission shall fix a special minimum wage for such a woman.

* * * * * * *

This order shall become effective sixty (60) days from the date hereof.

Dated November 10, 1917.

EMPLOYMENT AND UNEMPLOYMENT.

WORK OF FEDERAL, STATE, AND MUNICIPAL EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of November, 1917, and in cases where figures are available, for the month of November, 1916. For the United States figures are given from public employment offices in 41 States and the District of Columbia, Federal employment offices in 32 States, Federal-State employment offices in 4 States, a Federal-State-county-municipal employment office in 2 States, Federal-municipal employment offices in 1 State, State employment offices in 16 States, State-municipal employment offices in 3 States, municipal employment offices in 9 States, and a municipal-private employment office in 1 State. Figures from Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Alabama:												
Mobile (Federal)	.....	1	.....	4	6	15	(1)	(1)	.....	1	.....	1
Arizona:												
Phoenix (Federal)	.....	401	.....	1,124	.....	1,146	.....	(1)	.....	1,016	.....	966
Arkansas:												
Little Rock (State)	.....	79	.....	1,583	.....	2,495	.....	(1)	.....	511	.....	507
California:												
Fresno (State)	.....	579	.....	1,369	.....	[2] 848	.....	(1)	.....	1,383	.....	1,260
Fresno (municipal)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles (Federal)	4	(1)	8	(1)	103	(1)	(1)	(1)	9	(1)	6	(1)
Los Angeles (State-municipal)	2,622	3,594	4,298	6,020	2,060	2,897	(1)	(1)	4,611	6,185	4,012	5,648
Oakland (State)	706	1,125	953	1,913	510	[2] 1,025	393	(1)	984	1,859	753	1,160
Sacramento (Federal)	.....	3	.....	11	.....	32	.....	(1)	.....	11	.....	11
Sacramento (State)	312	399	760	1,222	490	[2] 516	245	(1)	717	1,149	637	1,009
Sacramento (municipal)	(1)	(1)	253	(1)	60	(1)	(1)	(1)	253	(1)	253	(1)
San Diego (Federal)	486	(1)	1,446	(1)	715	(1)	(1)	(1)	1,203	(1)	909	(1)
San Francisco (Federal)	345	577	790	2,239	1,146	2,512	.....	.....	588	2,006	325	1,602
San Francisco (State)	1,032	2,123	1,941	4,407	2,110	2,730	817	(1)	2,180	4,849	1,915	4,100
Total	.....	.....	.....	.....	.....	.....	.....	.....	10,545	17,442	8,840	15,090

[1] Not reported.

[2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Colorado:												
Colorado Springs (State)	.....	552	.....	552	.....	[1] 496	.....	(2)	.....	(2)	.....	430
Denver (Federal)	18	16	18	2,791	77	149	(2)	(2)	21	142	19	74
Denver No. 1 (State)	.....	513	.....	513	.....	[1] 1,495	.....	(2)	.....	(2)	.....	408
Denver No. 2 (State)	.....	524	.....	524	.....	[1] 527	.....	(2)	.....	(2)	.....	337
Denver (municipal)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pueblo (State)	.....	621	.....	621	.....	[1] 624	.....	(2)	.....	(2)	.....	588
Total	.....	.....	.....	.....	.....	.....	.....	.....	21	142	19	1,837
Connecticut:												
Bridgeport (Federal)	.....	538	.....	668	.....	859	.....	(2)	.....	627	.....	627
Bridgeport (State)	820	(2)	(2)	668	(2)	[1] 859	(2)	(2)	(2)	(2)	706	627
Hartford (State)	1,189	(2)	(2)	1,343	(2)	[1] 1,572	(2)	(2)	(2)	(2)	961	1,221
New Haven (State)	977	(2)	(2)	826	(2)	[1] 920	(2)	(2)	(2)	(2)	803	685
Norwich (State)	178	(2)	(2)	251	(2)	[1] 281	(2)	(2)	(2)	(2)	152	237
Waterbury (State)	162	(2)	(2)	158	(2)	[1] 190	(2)	(2)	(2)	(2)	117	124
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	627	2,739	2,894
Delaware:												
Wilmington (Federal)	14	15	.....	800	61	460	.....	.....	67	398	42	387
District of Columbia:												
Washington (Federal)	.....	237	.....	759	.....	1,405	.....	(2)	.....	1,319	.....	1,161
Florida:												
Jacksonville (Federal)	.....	5	.....	240	87	146	.....	.....	19	130	19	91
Miami (Federal)	7	12	9	48	58	60	.....	.....	10	35	6	29
Pensacola (Federal)	.....	(2)	.....	(2)	.....	4	.....	(2)	.....	(2)	.....	(2)
Tampa (Federal)	.....	(2)	.....	(2)	.....	57	.....	(2)	.....	(2)	.....	(2)
Total	.....	.....	.....	.....	.....	.....	.....	.....	29	[3] 165	25	[3] 120
Georgia:												
Savannah (Federal)	2	4	35	100	79	160	.....	.....	36	37	21	19
Idaho:												
Boise (municipal)	45	37	139	159	[1] 88	[1] 97	(2)	(2)	88	97	81	94
Moscow (Federal)	.....	5	.....	500	.....	114	.....	(2)	.....	114	.....	114
Total	.....	.....	.....	.....	.....	.....	.....	.....	88	211	81	208
Illinois:												
Chicago (Federal)	448	315	2,202	1,944	2,263	2,077	(2)	(2)	2,141	1,599	2,101	1,434
Chicago (State)	4,239	3,953	10,793	14,729	8,897	13,158	3,007	1,371	11,454	14,011	8,531	11,553
East St. Louis (State)	607	667	1,252	1,045	611	461	513	516	1,086	969	948	932
Peoria (State)	796	956	1,314	1,508	223	406	748	859	921	1,245	919	1,234
Rock Island-Moline (State)	(2)	1,019	596	3,739	572	1,396	(2)	933	(2)	2,235	514	2,081
Rockford (State)	778	809	1,220	1,216	735	1,038	247	219	819	868	779	755
Springfield (State)	516	591	717	1,032	199	314	401	529	545	776	506	599
Total	.....	.....	.....	.....	.....	.....	.....	.....	16,966	21,703	14,298	18,588

[1] Number applying for work. [2] Not reported. [3] Not including two offices not reporting.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Indiana:												
Evansville (State)	505	87	506	365	114	438	206	61	456	465	494	365
Fort Wayne (State)	166	379	238	702	167	153	30	541	197	694	183	635
Indianapolis (Federal)	178	165	427	633	623	1,857	(1)	(1)	430	580	347	486
Indianapolis (State)	479	1,720	484	1,741	[2] 397	1,503	(1)	131	397	1,705	397	1,634
South Bend (State)	235	177	921	247	496	185	76	108	491	275	430	241
Terre Haute (State)	.....	120	.....	287	.....	175	.....	43	.....	218	.....	217
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,971	3,937	1,851	3,578
Iowa:												
Des Moines (Federal-State)	30	63	145	468	148	356	44	35	157	377	111	271
Kansas:												
Topeka (State)	63	378	70	802	98	263	6	.....	76	230	64	222
Kentucky:												
Louisville (State)	468	156	460	152	[2] 670	[2] 191	(1)	(1)	460	152	460	152
Louisville (municipal-private)	(1)	224	238	341	323	250	677	476	258	390	93	214
Total	.....	.....	.....	.....	.....	.....	.....	.....	718	542	553	366
Louisiana:												
New Orleans (Federal-State)	46	106	56	631	184	201	(1)	(1)	147	600	27	446
Maine:												
Portland (Federal)	.....	4	.....	20	.....	8	(1)	(1)	.....	.....	.....	.....
Maryland:												
Baltimore (Federal)	125	78	176	492	214	350	(1)	(1)	160	387	160	255
Massachusetts:												
Boston (Federal)	.....	175	.....	2,250	51	3,465	(1)	(1)	6	2,016	6	1,033
Boston (State)	1,891	1,436	2,153	1,776	[3] 1,214	[2] 1,166	(1)	(1)	[4] 3,389	2,825	1,500	1,155
Springfield (State)	953	753	1,193	1,042	[3] 489	[2] 439	(1)	(1)	[4] 1,484	1,387	899	850
Worcester (State)	976	853	1,256	1,126	[3] 570	[2] 531	(1)	(1)	[4] 1,451	1,250	711	727
Total	.....	.....	.....	.....	.....	.....	.....	.....	6,330	7,478	3,116	4,085
Michigan:												
Battle Creek (State)	56	189	194	464	[2] 115	[2] 605	(1)	(1)	93	464	93	464
Bay City (State)	68	47	229	101	[2] 211	[2] 215	(1)	(1)	171	182	171	162
Detroit (Federal)	153	.....	1,099	.....	762	.....	(1)	.....	762	.....	729	.....
Detroit (State)	500	1,121	5,678	4,386	[2] 5,452	[2] 4,386	(1)	(1)	5,452	4,386	5,452	4,376
Flint (State)	709	188	709	596	[2] 709	[2] 1,044	(1)	(1)	709	591	709	542
Grand Rapids (State)	488	378	747	661	[2] 747	[2] 831	(1)	(1)	731	747	731	747
Jackson (State)	322	385	701	556	[2] 765	[2] 685	(1)	(1)	693	685	687	545
Kalamazoo (State)	203	270	335	390	[2] 480	[2] 743	(1)	(1)	393	385	393	334
Lansing (State)	47	91	162	603	[2] 172	[2] 1,025	(1)	(1)	153	603	153	603
Muskegon (State)	59	41	262	241	[2] 205	[2] 301	(1)	(1)	188	214	173	214
Saginaw (State)	146	132	837	522	[2] 714	[2] 452	(1)	(1)	714	452	714	452
Sault Ste. Marie (Federal)	3	1	40	40	37	40	.....	.....	23	23	23	21
Total	.....	.....	.....	.....	.....	.....	.....	.....	10,082	8,732	10,028	8,460

[1] Not reported.

[2] Number applying for work.

[3] Number who were registered.

[4] Number of offers and positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Minnesota:												
Duluth (State)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1,181	1,495
Minneapolis (Federal)	12	7	15	11	36	202	(1)	(1)	10	1	10	1
Minneapolis (State)	(1)	(1)	(1)	2,950	(1)	[2] 2,918	(1)	(1)	(1)	2,701	1,951	2,100
St. Paul (State)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1,118	828
Total	.....	.....	.....	.....	.....	.....	.....	.....	10	2,702	4,260	4,424
Mississippi:												
Gulfport (Federal)	.....	3	.....	500	43	677	(1)	(1)	10	321	9	319
Missouri:												
Kansas City (Federal-State)	579	1,005	1,495	2,433	1,393	2,411	351	120	1,744	1,999	1,462	1,808
St. Joseph (State)	618	534	1,032	877	1,030	805	6	9	1,035	814	1,032	811
St. Louis (Federal-State)	387	260	624	2,015	483	1,918	44	18	418	1,850	388	1,706
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,197	4,663	2,882	4,325
Montana:												
Butte (Municipal)	300	(1)	430	562	380	[2] 562	(1)	(1)	400	(1)	390	520
Nebraska:												
Lincoln (Federal)	.....	228	.....	476	.....	441	.....	(2)	.....	413	.....	380
Omaha (Federal-State - county - municipal)	.....	946	.....	1,678	.....	804	.....	602	.....	1,170	.....	1,087
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,583	.....	1,467
Nevada:												
Reno (Federal)	12	53	81	125	76	108	(1)	(1)	77	108	76	108
New Jersey:												
Jersey City (Federal-State)	80	93	511	851	413	823	.....	.....	341	521	257	448
Newark [3] (Federal-State)	1,469	1,490	2,505	6,620	2,572	1,457	.....	.....	2,180	4,282	1,610	5,823
Orange (Federal-State)	220	245	235	792	110	152	.....	.....	102	310	85	262
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,623	5,113	1,952	6,533
New Mexico:												
Albuquerque (Federal)	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
New York:												
Albany (State)	511	540	687	825	551	554	278	408	816	918	449	567
Buffalo (Federal)	130	1,235	1,869	1,826	930	1,643	.....	.....	991	2,063	803	1,441
Buffalo (State)	981	1,160	2,345	1,817	1,599	1,430	125	213	2,096	2,059	1,472	1,439
New York City (Federal)	99	2,593	587	11,668	970	8,821	.....	.....	561	4,483	427	3,069
New York City (State)	1,722	2,130	2,388	2,667	1,181	1,641	577	978	2,522	2,786	1,477	1,594
New York City (municipal)	2,820	2,364	3,166	2,487	2,269	2,401	(1)	2,047	4,197	3,517	2,546	2,231
Rochester (State)	1,295	1,206	1,747	1,719	792	844	335	590	1,617	1,587	922	1,045
Syracuse (State)	818	773	1,206	1,348	693	751	133	241	1,152	1,378	905	947
Total	.....	.....	.....	.....	.....	.....	.....	.....	13,952	9,268	9,001	5,817

[1] Not reported. [2] Number applying for work.
[3] Tentative assignment as a zone, pending permanent organization as a zone.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
North Dakota:												
Bismarck (Federal)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio:												
Akron (State-municipal)	(1)	(1)	2,305	2,335	906	948	1,621	1,739	1,783	1,794	1,491	1,467
Athens (State-municipal)	.....	(1)	.....	131	.....	44	.....	99	.....	139	.....	86
Canton (State-municipal)	.....	(1)	.....	517	.....	482	.....	246	.....	515	.....	329
Chillicothe (State-municipal)	.....	(1)	.....	648	.....	533	.....	307	.....	638	.....	561
Cincinnati (State-municipal)	(1)	(1)	1,722	2,626	1,612	2,014	2,247	3,151	1,980	2,758	1,277	2,178
Cleveland (Federal)	15	27	60	395	78	340	(1)	(1)	66	145	16	91
Cleveland (State-municipal)	(1)	(1)	6,791	7,014	2,665	2,774	7,249	8,411	6,259	6,650	5,104	5,680
Columbus (State-municipal)	(1)	(1)	2,275	3,537	724	1,402	2,446	3,137	2,114	3,469	1,763	2,531
Dayton (State-municipal)	(1)	(1)	1,013	1,948	753	1,527	991	1,441	914	1,777	814	1,457
Hamilton (State-municipal)	.....	(1)	.....	359	.....	299	.....	90	.....	357	.....	286
Lima (State-municipal)	.....	(1)	.....	375	.....	342	.....	110	.....	375	.....	340
Mansfield (State-municipal)	.....	(1)	.....	214	.....	160	.....	97	.....	218	.....	173
Marietta (State-municipal)	.....	(1)	.....	159	.....	171	.....	85	.....	204	.....	183
Marion (State-municipal)	.....	(1)	.....	335	.....	348	.....	182	.....	419	.....	311
Portsmouth (State-municipal)	.....	(1)	.....	508	.....	404	.....	135	.....	433	.....	315
Sandusky (State-municipal)	.....	(1)	.....	224	.....	209	.....	112	.....	268	.....	186
Springfield (State-municipal)	.....	(1)	.....	189	.....	252	.....	138	.....	209	.....	148
Steubenville (State-municipal)	.....	(1)	.....	661	.....	320	.....	365	.....	611	.....	492
Tiffin (State-municipal)	.....	(1)	.....	401	.....	234	.....	126	.....	275	.....	199
Toledo (State-municipal)	(1)	(1)	3,197	4,806	1,542	2,706	2,491	4,898	2,567	4,814	2,192	4,283
Washington C. H. (State-municipal)	.....	(1)	.....	101	.....	63	.....	44	.....	76	.....	56
Youngstown (State-municipal)	(1)	(1)	1,160	1,761	612	950	1,030	1,247	1,104	1,571	944	1,421
Zanesville (State-municipal)	.....	(1)	.....	153	.....	176	.....	79	.....	184	.....	114
Total	.....	.....	.....	.....	.....	16,787	.....	27,899	.....	13,601	.....	22,887
Oklahoma:												
Enid (State)	89	88	(1)	117	(1)	[2] 137	(1)	(1)	(1)	113	79	102
Muskogee (State)	(1)	349	(1)	558	343	[2] 404	(1)	(1)	(1)	383	224	299
Oklahoma City (State)	485	275	(1)	594	(1)	[2] 563	(1)	(1)	(1)	534	428	463
Tulsa (State)	(1)	810	(1)	1,620	844	[2] 1,389	(1)	(1)	(1)	1,332	772	1,312
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	2,362	1,503	2,176
Oregon:												
Astoria (Federal)	43	.....	126	.....	[2] 452	.....	(1)	.....	130	.....	122	.....
Portland (Federal)	962	.....	1,566	.....	2,040	.....	(1)	(1)	1,602	(1)	1,521	.....
Portland (municipal)	761	1,190	1,393	3,187	520	[2] 84	(1)	(1)	(1)	(1)	1,285	2,707
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,732	(1)	3,928	2,707

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Pennsylvania:												
Altoona (State)	(1)	13	83	215	30	74	2	63	21	64	21	63
Erie (State)	.....	182	.....	625	.....	174	.....	67	.....	209	.....	200
Harrisburg (State)	(1)	150	494	374	300	232	101	117	302	274	255	249
Johnstown (State)	(1)	75	352	142	71	88	23	18	80	98	67	90
Philadelphia (Federal)	114	142	530	5,991	295	1,037	(1)	(1)	286	1,057	223	955
Philadelphia (State)	(1)	435	1,327	4,940	933	5,881	792	454	1,393	4,843	1,153	4,678
Pittsburgh (Federal)	22	32	86	602	865	518	.....	.....	466	490	402	457
Pittsburgh (State)	(1)	47	1,239	2,787	741	1,143	200	335	754	1,179	703	1,128
Scranton (State)	.....	63	.....	126	.....	124	.....	2	.....	60	.....	59
Williamsport (State)	.....	40	.....	160	.....	306	.....	141	.....	228	.....	202
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,302	8,192	2,824	8,391
Rhode Island:												
Providence (Federal)	.....	13	.....	510	.....	959	.....	.....	.....	469	.....	352
Providence (State)	177	170	208	335	30	270	13	108	208	335	208	335
Total	.....	.....	.....	.....	.....	.....	.....	.....	208	804	208	687
South Carolina:												
Charleston (Federal)	1	7	50	57	12	264	(1)	(1)	5	242	5	242
Tennessee:												
Memphis (Federal)	.....	5	.....	50	.....	1,242	(1)	(1)	.....	279	.....	279
Texas:												
Dallas (municipal)	219	79	388	228	[2] 1,060	(1)	10	(1)	352	320	300	251
El Paso (Federal)	.....	51	.....	78	.....	90	.....	(1)	.....	70	.....	17
Fort Worth (Federal)	.....	14	.....	1,200	.....	2,611	.....	(1)	.....	1,082	.....	(1)
Fort Worth (municipal)	124	116	284	360	219	[3] 522	26	1	196	.....	190	.....
Galveston (Federal)	9	.....	110	.....	24	55	(1)	(1)	14	470	6	401
Houston (Federal)	2	.....	2	.....	6	44	(1)	(1)	.....	33	.....	29
Total	.....	.....	.....	.....	.....	.....	.....	.....	562	1,975	496	698
Virginia:												
Norfolk (Federal)	10	10	243	212	170	221	(1)	(1)	92	174	45	27
Richmond (municipal)	283	254	433	408	365	[4] 448	(1)	(1)	524	488	214	201
Total	.....	.....	.....	.....	.....	.....	.....	.....	616	662	259	228
Washington:												
Aberdeen (Federal)	.....	8	.....	38	.....	92	.....	(1)	.....	38	.....	38
Bellingham (Federal-municipal)	78	72	184	196	[4] 203	[4] 199	(1)	(1)	170	164	158	154
Everett (municipal)	(1)	(1)	(1)	254	(1)	[4] 603	(1)	(1)	(1)	425	281	254
North Yakima (Federal)	.....	422	.....	867	.....	1,586	.....	(1)	.....	810	.....	766
Seattle (Federal)	.....	119	.....	1,831	.....	3,819	.....	(1)	.....	1,314	.....	1,262
Seattle (municipal)	2,495	2,969	4,269	5,870	(1)	(1)	(1)	(1)	4,320	5,945	3,948	5,450
Spokane (Federal)	.....	42	.....	161	.....	274	.....	(1)	.....	132	.....	124

[1] Not reported.
[2] Includes all casual and transient applicants.
[3] Includes 235 transients.
[4] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Concluded.

UNITED STATES—Concluded.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.	Nov., 1916.	Nov., 1917.
Washington—Concld.												
Spokane (municipal)	2,025	1,442	2,614	1,850	.....	.....	.....	.....	2,510	1,820	2,442	1,795
Tacoma (Federal-municipal)[1]	.....	551	.....	1,388	.....	2,396	.....	.....	.....	1,342	.....	1,280
Walla Walla (Federal)	.....	265	.....	325	.....	255	.....	(2)	.....	141	.....	127
Total	.....	.....	.....	.....	.....	.....	.....	.....	7,001	2,131	6,829	1,250
Wisconsin:												
La Crosse (State-municipal)	159	130	115	108	231	206	(2)	(2)	145	138	69	107
Milwaukee (Federal-State-county-municipal)	3,547	4,171	1,600	1,682	3,297	3,970	(2)	(2)	3,450	3,968	2,625	2,734
Oshkosh (State-municipal)	116	108	106	125	204	184	(2)	(2)	106	127	86	103
Superior (State-municipal)	816	397	296	1,263	640	913	(2)	(2)	688	928	540	592
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,389	5,161	3,320	3,536
Grand total	.....	.....	.....	.....	.....	.....	.....	.....	118,562	132,474	105,629	122,610

CANADA.

Quebec:												
Montreal (provincial)	301	166	1,011	545	[3] 580	[3] 403	(1)	(1)	639	493	529	418
Quebec (provincial)	(1)	34	100	124	[3] 90	[3] 155	(1)	(1)	(1)	137	59	123
Total	.....	.....	.....	.....	.....	.....	.....	.....	[4] 639	630	588	541

[1] Figures for this office are carried regularly in the REVIEW under the subject "Federal employment work of the Department of Labor," to which the reader is referred.
[2] Not reported.
[3] Number applying for work.
[4] Exclusive of Quebec, not reported.

REPORT OF EMPLOYMENT EXCHANGES IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) FOR FIVE WEEKS ENDING OCTOBER 12, 1917.

As reported by the British Labor Gazette of November, 1917, the total number of workpeople remaining on the registers of the 383 British employment offices on October 12, 1917, was 107,914, compared with 109,216 on September 7, 1917, and with 115,399 on October 13, 1916. These figures comprise workers in professional, commercial, and clerical, as well as industrial occupations.

The operations of the employment exchanges for the five weeks are summarized as follows:

Item.	Men.	Women.	Boys.	Girls.	Total.
On register on Sept. 7, 1917	28,247	64,667	7,033	9,377	109,324
Number of individuals registered during period	98,728	162,979	25,569	24,344	311,620
Total	126,975	227,646	32,602	33,721	420,944
Re-registrations during period	4,249	4,592	528	444	9,813
On register on Oct. 12, 1917	28,572	63,985	7,030	8,327	107,914
Vacancies notified during period	88,471	73,968	14,535	13,513	190,487
Vacancies filled during period	57,859	62,397	11,897	10,231	142,384
Applicants placed in other districts	14,374	13,027	1,958	1,316	30,705

The average daily number of registrations and of vacancies filled for the five weeks ending October 12, 1917, is shown in the following table, together with comparative figures for the periods ending September 7 1917. and October 13, 1916:

Department.	Average registration per day in period ending—			Average vacancies filled in period ending—		
	Oct. 12, 1917.	Sept. 7, 1917.	Oct. 13, 1916.	Oct. 12, 1917.	Sept. 7, 1917.	Oct. 13, 1916.
Men	3,432	3,338	3,596	1,929	1,858	1,947
Women	5,586	5,969	6,190	2,080	2,291	2,383
Boys	870	894	781	396	402	370
Girls	826	916	859	341	343	368
Total	10,714	11,117	11,426	4,746	4,894	5,068

EMPLOYMENT IN SELECTED INDUSTRIES IN NOVEMBER, 1917.

The Bureau of Labor Statistics received reports concerning the volume of employment in November, 1917, from representative manufacturing establishments in 13 industries. Comparing the data for November, 1917, with those from identical establishments for November, 1916, it is shown that in six industries there was an increase in the number of employees and in seven a decrease. The cigar-manufacturing industry shows the greatest increase—11 per cent—while car building and repairing shows the greatest decrease—7.9 per cent.

Each of the 13 industries canvassed showed an increase in the total amount of the pay roll for November, 1917, as compared with November, 1916. The greatest increase indicated—49.3 per cent—was in the iron and steel industry. There was an increase of 45.6 per cent in woolen manufacturing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER, 1916, AND NOVEMBER, 1917.

Industry.	Establishments reporting for November, both years.	Period of pay roll.	Number on pay roll in November—		Per cent of increase (+) or decrease (−).	Amount of pay roll in November—		Per cent of increase (+) or decrease (−).
			1916	1917		1916	1917	
Boots and shoes	65	1 week	52,842	50,707	− 4.0	$731,685	$769,187	+ 5.1
Cotton manufacturing	53	...do	44,072	43,395	− 1.5	420,695	538,535	+28.0
Cotton finishing	17	...do	14,700	14,870	+ 1.2	188,340	238,515	+26.6
Hosiery and underwear	50	...do	30,744	30,586	− 0.5	315,870	388,220	+22.9
Woolen	45	...do	39,792	42,625	+ 7.1	490,901	714,909	+45.6
Silk	37	2 weeks	12,525	11,615	− 7.3	262,673	282,321	+ 7.5
Men's ready-made clothing	34	1 week	20,314	20,980	+ 3.3	294,071	358,829	+ 22.0
Iron and steel	110	½ month	177,070	193,857	+ 9.5	7,044,369	10,517,074	+49.3
Car building and repairing	21	...do	28,619	26,356	− 7.9	959,004	1,093,955	+ 14.1
Cigar manufacturing	57	1 week	18,135	20,129	+11.0	209,222	258,904	+23.7
Automobile manufacturing	40	...do	107,479	101,365	− 5.7	2,375,177	2,529,603	+ 6.5
Leather manufacturing	33	...do	14,878	14,563	− 2.1	212,026	253,903	+19.8
Paper making	50	...do	23,724	25,955	+ 9.	347,320	450,603	+29.7

The following table shows the number of persons actually working on the last full day of the reported pay period in November, 1916, and November, 1917. Many establishments do not keep a record of this fact, and consequently the number reporting such data is small. This should be taken into consideration when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN NOVEMBER, 1916, AND NOVEMBER, 1917.

Industry.	Establishments reporting for November, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in November—		Per cent of increase (+) or decrease (−).
			1916	1917	
Boots and shoes	13	1 week	5,114	4,809	− 6.0
Cotton manufacturing	32	...do	25,653	24,574	− 4.2
Cotton finishing	13	...do	10,483	10,646	+ 1.6
Hosiery and underwear	8	...do	10,760	10,632	− 1.2
Woolen	36	...do	32,178	35,439	+10.1
Silk	20	2 weeks	7,427	6,632	−10.7
Men's ready-made clothing	4	1 week	7,781	6,222	−20.0
Iron and steel	91	½ month	141,459	154,492	+ 9.2
Car building and repairing	20	...do	24,920	23,317	− 6.4
Cigar manufacturing	12	1 week	2,334	2,586	+10.8
Automobile manufacturing	17	...do	68,210	61,432	− 9.9
Leather manufacturing	14	...do	8,830	8,803	− 0.3
Paper making	12	...do	8,213	9,085	+10.6

The figures in the table below show that in 12 of the 13 industries there were more persons on the pay roll in November, 1917, than in October, 1917. The 7.9 per cent increase in the boot and shoe industry was the greatest. The only decrease—3.4 per cent—was in the automobile-manufacturing industry.

All of the 13 industries reporting show an increase in the total amount of the pay roll when comparing November, 1917, with Octo-

ber, 1917. The greatest increase—13.2 per cent—is shown in the cotton-manufacturing industry. There was an increase of 13 per cent for the boot and shoe industry. The silk industry shows the smallest increase—less than one-tenth of 1 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN OCTOBER, 1917. AND NOVEMBER, 1917.

Industry.	Establishments reporting for October and November.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
			October, 1917.	November, 1917.		October, 1917.	November, 1917.	
Boots and shoes	68	1 week	48,407	52,249	+7.9	$700,951	$792,346	+13.0
Cotton manufacturing	54	...do	42,579	43,474	+2.1	475,584	538,414	+13.2
Cotton finishing	18	...do	14,693	15,131	+3.0	221,606	242,749	+ 9.5
Hosiery and underwear	47	...do	28,358	28,557	+ .7	338,370	364,794	+ 7.8
Woolen	45	...do	41,923	42,992	+2.5	665,626	720,612	+ 8.3
Silk	35	2 weeks	11,133	11,230	+ .9	273,447	273,517	(1)
Men's ready-made clothing	34	1 week	19,135	19,847	+3.7	307,556	341,477	+11.0
Iron and steel	110	½ month	198,418	198,766	+ .2	10,664,992	10,794,996	+ 1.2
Car building and repairing	16	...do	20,317	21,356	+5.1	810,919	881,417	+ 8.7
Cigar manufacturing	61	1 week	19,727	20,777	+5.3	250,809	269,527	+ 7.5
Automobile manufacturing	41	...do	111,895	108,057	−3.4	2,640,039	2,721,291	+ 3.1
Leather manufacturing	30	...do	11,016	11,752	+6.7	186,762	204,227	+ 9.4
Paper making	48	...do	25,438	25,594	+ .6	408,463	444,747	+ 8.9

[1] Less than one-tenth of 1 per cent.

A very much smaller number of establishments reported as to the number of persons actually working on the last full day of the reported pay period. The following table gives in comparable form the figures for October and November of this year. The small number of establishments represented should be noted when using the figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN OCTOBER, 1917, AND NOVEMBER, 1917.

Industry.	Establishments reporting for October and November.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			October, 1917.	November, 1917.	
Boots and shoes	24	1 week	10,581	10,365	−2.0
Cotton manufacturing	35	...do	25,268	25,865	+2.4
Cotton finishing	13	...do	9,702	10,124	+4.3
Hosiery and underwear	12	...do	11,547	11,532	− .1
Woolen	36	...do	34,719	35,587	+2.5
Silk	22	2 weeks	7,676	7,713	+ .5
Men's ready-made clothing	5	1 week	6,603	6,322	−4.3
Iron and steel	91	½ month	155,642	157,236	+1.0
Car building and repairing	16	...do	18,395	19,300	+4.9
Cigar manufacturing	21	1 week	4,178	4,269	+2.2
Automobile manufacturing	23	...do	70,406	67,516	−4.1
Leather manufacturing	12	...do	5,632	6,097	+8.3
Paper making	14	...do	9,132	9,608	+5.2

CHANGES IN WAGE RATES.

Of the 13 industries reporting, all except that of men's ready-made clothing show that changes in the wage rates were made during the period October 15 to November 15, 1917. A number of the establishments did not answer the inquiry relating to the wage rate changes, but in such cases it is probably safe to assume that no changes were made.

In the iron and steel industry, 19 plants report an increase in the wage rates. One plant reports an increase of 11 per cent to about 60 per cent of its employees; three plants report an increase of 10 per cent to all employees; while a fourth reports a like increase to time workers only. One plant reports an increase of 7 per cent to two-thirds of its men. Three plants report an increase of 6¼ per cent to 40 per cent of their employees, and a fourth one a like increase to 10 per cent of its force. Three plants report an increase of 5.97 per cent to 50 per cent of their employees, while a fourth reports a like increase to 15 per cent of its force. Two plants report an increase of 5 per cent to 50 per cent and 60 per cent, respectively, of their employees. One plant reports 3½ per cent increase to 60 per cent of the force; one plant reports an increase of 1.6 per cent to 23 per cent of its employees; and one plant reports an increase of 25 cents per turn to all employees.

Increases in wage rates were reported by 14 plants in the cotton-manufacturing industry. Ten plants reported a 10 per cent increase as follows: Three to all employees, one to approximately all, three a "general" increase, one to all except office force, one to 90 per cent of force, and one does not report the part of the force affected. One plant reports 8 per cent to all employees; two plants, an increase of 5 per cent to all employees; and one an increase of 5 per cent to 14 per cent of its employees.

Increase of wage rates were reported by 10 plants in the cotton-finishing industry. Two plants show an increase of 10 per cent to all employees; one shows 10 per cent increase to 98 per cent of its force; and five show a 10 per cent increase to 95 per cent of their employees.

Increases in the wage rates are reported by 6 plants in the paper-making industry. One plant reports an increase of 25 per cent to 90 per cent of the force; one an increase of 15 per cent to male and 10 per cent to female employees; one reports an increase of 20 per cent, but does not state the part of the force affected; and three report an increase of 10 per cent to all employees.

In the hosiery and underwear industry two establishments report an increase of 10 per cent to all employees and a third one 10 per cent to 25 per cent of its employees.

Two plants in the woolen industry granted a 10 per cent increase to all employees, while another granted 10 per cent to all except overseers.

One plant in car building and repairing reported 15 per cent increase to carmen and 10 per cent to foremen; one gave an increase of 2 cents per hour to organized men and 1½ cents per hour to unorganized men; a third reports 10 per cent increase to its clerks.

In the automobile industry one plant reports an increase of 10 per cent to all employees, and one reports an increase of .03 in the productive average hourly rate.

One establishment in the boot-and-shoe industry reports an increase of 10 per cent to 5 per cent of the force.

In the silk industry one plant reports an increase of 10 per cent to 50 per cent of its force.

In the cigar-manufacturing industry one plant reports an increase of 8 per cent to its salaried men—about 2 per cent of the force.

In leather manufacturing, one plant reports an increase of 10 per cent to 95 per cent of its employees.

EMPLOYMENT IN THE STATE OF NEW YORK.

The Bureau of Employment of the New York State Industrial Commission on December 1 issued the following statement concerning the labor market in New York:

A comparison of the figures of the work done by the State Bureau of Employment for the months of November and October, 1917, shows that there was a decided falling off along all the lines, not only in applications for work, but also in requests for help, and of placements. It is very interesting to note that the requests for help for the month of November, 1916, slightly exceed the number of requests for help in the same month, 1917.

Publication throughout the country of an alleged labor shortage still continues, some of these reports being given out by reliable financial institutions. What is really meant in many of the references to shortage is "turnover." On account of the restlessness of workers in many places, this "turnover" has very largely increased in the past few months. This bureau has a report from one large plant in a neighboring State, where there has been a complete change in a force of several thousand workers in the period of one month. There is, at this time, of course, the usual restlessness among all classes of people, due to the fact that we are at war, and are beginning to realize that we are taking an important part in it. This is perfectly natural, and needs a little time for the cure. But, in addition to this, and contributing more largely to the restlessness than anything else, is the constant repetition of the shortage of labor and the frequent publication about abnormal earnings, especially in munition factories. A worker reading of this labor shortage, and these large earnings, gets restless, quits his present job, and goes hunting the elusive one paying very high wages. The different offices of the bureau throughout the

State report a total of several hundred seekers of jobs every day. Many of these refuse to take the available jobs at the wages offered. One branch of the State Bureau of Employment had available over 500 jewelry workers just now laid off by jewelry manufacturers. Notice to this effect was sent to 55 of the largest employers in Greater New York, the notice being sent to those who might be in need of workers with this sort of experience. Only 5 firms out of the 55 answered the communication.

It is time for more sanity on the part of both the employer and employee regarding the present labor conditions. Let us take the figures relating to the actual situation in New York State. The State census of 1915 showed a total population of 9,687,000. Calculating on the percentage basis used by the United States census, there are at the present time in the State of New York about 3,300,000 persons engaged in gainful occupations. On the other hand, from the figures given out, as well as from liberal estimates made, the Army, Navy, and the Red Cross have taken about 140,000 men out of this total of over 3,000,000 workers. Another heavy military draft will have to be made before the labor power of the State is materially affected.

Contributing also to this apparent shortage is the fact that we are confronted with the need in the next few months for a great number of workers to do the technical work coming into existence through the needs of the war. Industry in this country has not heretofore called for such a high number of technically trained men. To solve this need, it will be necessary for employers to get together and decide on the number of workers each one should train to supply this coming need. This should be done in each industrial community through the cooperation of employers needing any kind of technically trained men. The United States is just now teaching thousands of men how to shoot a gun and handle a bayonet. Is it not just as desirable to teach men in this emergency how to handle a tool and a machine? Many thousands of soldiers are at this time just as unfamiliar with the rifle and the bayonet as are thousands of workers with the tool and the machine. We have great numbers of men available for the training. Let us train these now and later absorb them into the industries needing them before we consider the use of large numbers of untrained women.

EMPLOYMENT IN HARTFORD, CONNECTICUT.

The following statement of the condition of employment in Hartford, Conn., as indicated by the work of the State Free Employment Office, is taken from the labor market letter for November, 1917, issued by that office. The work done during the month of November, 1917, the last month in the statistical year, shows a larger number of placements than in any other month during the history of the employment office.

The increase in business was due to the tremendous call for laborers, the number of men placed reaching the high total of 1,025. Twenty-three laborers helped to meet the street department's needs for men to handle ashes; 126 men to work on farms were used, compared with 42 in November, 1916. Little change was noted in

the requirements for culinary help over that of a year ago. For nursery work 41 men were hired.

There were 23 nationalities represented among those who secured positions. A slight falling off in the number of colored male applicants was noted, but the large number of colored women placed (80) gave the colored race third rank in the order of nationality. An unexpected decrease in the number of German applicants was observed, there being but 18, which is less than half of the customary number. The big drive for workers came in the early part of the month, falling off as colder weather approached. The average number of daily placements was 48.8, compared with 46 last month, and 38.4 in November, 1916.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN OCTOBER, 1917.

The table below pertaining to the condition of employment in Great Britain and Ireland was compiled from a report published in the British Labor Gazette of November, 1917.

Few important changes relating to the number of employees in October, 1917, as compared with September, 1917, are shown. Seamen show an increase of 11.6 per cent in the number of men; tin plate, steel, and galvanized sheet trades show an increase of 8.2 per cent in the number of mills in operation; while dock and riverside labor shows a decrease of 7.2 per cent in the number of employees. In comparing October, 1917, with October, 1916, on this point, more important changes are seen. Dock and riverside labor shows a decrease of 28.3 per cent, seamen show a decrease of 23 per cent, food preparation shows an increase of 14 per cent, dressmaking and millinery a decrease of 12.2 per cent; while quarrying, tin plate, steel, and galvanized sheet trades, cotton trade, and cement trade, show a decline of more than 10 per cent each.

Earnings show more important changes in the periods under consideration. Comparing October, 1917, with September, 1917, the tailoring trades show an increase of 12 per cent, while food preparation shows an increase of 5.1 per cent. All the other industries show small increases in earnings of employees except the cement trade, which shows no change, and the linen trade, which shows a decrease of 1 per cent.

In comparing October, 1917, with October, 1916, on the question of earnings of employees more important changes are shown, all of them being increases, except the cotton trade which shows a decrease of 1.8 per cent. The linen trade shows the greatest increase—33.5

per cent. Tailoring shows an increase of 31.2 per cent. Eight trades show increases ranging from 11.5 per cent to 19.5 per cent, while the other trades reporting increases of earnings of employees show percentages ranging below 10 per cent.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN OCTOBER, 1917, AS COMPARED WITH SEPTEMBER, 1917, AND OCTOBER, 1916.

[Compiled from figures in the Labor Gazette (London), November, 1917.]

Industries and basis of comparison.	Per cent of increase (+) or decrease (−) in October, 1917, as compared with—	
	September, 1917.	October, 1916.
Coal mining: Average number of days worked	−0.7	− 4.9
Iron mining: Average number of days worked	−1.0	+ 2.1
Quarrying: Number of employees	−0.2	−11.5
Pig iron: Number of furnaces in blast	+0.7	+ 3.1
Iron and steel works:		
Number of employees	+0.8	+ 8.0
Number of shifts worked	+0.9	+ 8.2
Engineering trades: Number of employees	− .03	− .29
Shipbuilding trades: Number of employees	− .08	− .12
Tinplate, steel and galvanized sheet trades: Number of mills in operation	+8.2	−11.9
Cotton trade:		
Number of employees	−0.3	−11.5
Earnings of employees	+1.0	− 1.8
Woolen trade:		
Number of employees	+0.1	− 4.1
Earnings of employees	+0.9	+13.4
Worsted trade:		
Number of employees	+0.6	− 1.1
Earnings of employees	+0.6	+16.8
Hosiery trade:		
Number of employees	−0.4	− 4.8
Earnings of employees	+0.1	+ 8.7
Jute trade:		
Number of employees	+0.1	+ 1.2
Earnings of employees	+0.1	+11.5
Linen trade:		
Number of employees	−0.2	+ 3.2
Earnings of employees	−1.0	+33.5
Silk trade:		
Number of employees	−0.2	− 2.1
Earnings of employees	+1.6	+17.5
Carpet trade:		
Number of employees	+1.8	− 0.3
Earnings of employees	+3.2	+17.9
Lace trade:		
Number of employees	+0.5	− 7.5
Earnings of employees	+1.3	+ 3.0
Bleaching, printing, dyeing and finishing:		
Number of employees	−0.1	− 4.0
Earnings of employees	+0.7	+14.4
Boot and shoe trade:		
Number of employees	−0.2	− 5.2
Earnings of employees	+0.8	+ 6.5
Leather trades: Number of employees	−0.6	+ 0.2
Tailoring trades:		
Number of employees	+ 2.1	+ 0.6
Earnings of employees	+12.0	+31.2
Shirt and collar trade:		
Number of employees	− 1.0	− 8.8
Earnings of employees	+ 0.5	+ 4.9
Other clothing trades:		
Dressmaking and millinery—Number of employees	+ 2.0	−12.2
Wholesale, mantle, costume, blouse, etc.—		
Number of employees—London	− 3.4	− 3.2
Number of employees—Manchester	+ 1.8	− 3.6
Number of employees—Glasgow	+ 2.6	− 3.4
Corset trade: Number of employees	+ 1.3	−11.2
Building and construction of works: Number of employees	− 0.01	+ 0.1
Sawmilling and machining: Number of employees	+ 0.2	(1)
Brick trade:		
Number of employees	− 1.1	− 0.5
Earnings of employees	+ 1.9	+19.5
Cement trade:		
Number of employees	+ 0.3	−10.6
Earnings of employees	(1)	+ 5.6
Printing, bookbinding, and paper trades:		
Printing trades—		
Number of employees reported by trade-unions	+ 0.2	+ 0.3
Number of employees reported by employers	+ 0.3	− 9.7
Earnings of employees reported by employers	+ 3.6	+ 1.5
Bookbinding trades—		
Number of employees reported by trade-unions	.. (1)	− 0.2
Number of employees reported by employers	+ 0.9	− 7.1
Earnings of employees reported by employers	+ 1.6	+ 7.2
Paper trades: Number of employees	+ 0.6	− 1.5
Pottery trades:		
Number of employees	− 0.5	− 1.8
Earnings of employees	+ 3.1	+17.8
Glass trades:		
Number of employees	+ 0.1	− 1.8
Earnings of employees	+ 0.8	+ 7.4
Food preparation trades:		
Number of employees	+ 0.3	+14.0
Earnings of employees	+ 5.1	+ 5.9
Dock and riverside labor: Number of employees	− 7.2	−28.3
Seamen: Number of employees	+11.6	−23.0

[1] No change.

The extent of unemployment in Great Britain during the five weeks ending October 12, 1917, is indicated by the following table, which shows the operations of the Ministry of Labor employment exchanges for that period:

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE 5 WEEKS ENDED OCT. 12, 1917.

A.—Insured trades.

Occupation group.[1]	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Building:										
Carpenters, joiners, etc	3,729	360	4,510	81	2,444	73	74	1	62	.....
Bricklayers	1,820	.....	3,661	.....	1,277	.....	4	.....	2	.....
Masons	391	1	116	2	62	1	1	4	.....	2
Plasterers	611	.....	317	.....	220	.....	3	.....	1	.....
Painters, decorators, etc	2,252	308	2,318	439	1,536	437	34	7	17	8
Plumbers, glaziers	522	1	582	1	271	1	42	.....	26	.....
Other skilled occupations	53	4	71	.....	14	.....	12	1	5	1
Laborers	6,863	90	7,105	59	4,320	48	227	22	174	22
Works of construction	7,297	43	10,509	30	6,375	13	24	6	24	6
Sawmilling	1,097	1,742	970	1,509	505	1,454	257	148	231	143
Shipbuilding:										
Platers, riveters	1,153	19	1,563	10	705	7	18	.....	36	.....
Shipwrights	362	.....	558	4	371	4	9	.....	12	.....
Laborers	2,161	350	1,821	136	1,391	137	115	8	119	8
Engineering:										
Molders	848	170	829	144	441	126	63	42	52	36
Smiths	699	92	604	135	330	118	25	14	24	11
Erectors, fitters, turners	7,057	1,977	7,035	1,040	5.229	1,011	958	43	902	42
Metal machinists	2,596	8,497	2,036	8,662	1,340	8,237	705	338	680	302
Wiremen	710	75	744	157	460	123	72	11	69	11
Other skilled occupations	2,738	5,913	2,489	2,950	1,437	3,234	321	245	267	210
Laborers	10,013	2,784	8,989	2,413	8,315	2,631	485	108	473	106
Construction of vehicles	837	220	615	201	340	242	67	15	54	14
Cabinetmaking, etc	222	122	207	64	60	51	25	14	19	8
Miscellaneous metal trades	2,078	2,397	2,495	1,218	1,535	1,119	322	451	237	406
Precious metals, etc	139	293	230	281	88	257	88	107	68	95
Bricks and cement	74	49	176	66	94	36	10	8	13	4
Chemicals, etc	788	1,052	1,002	914	844	943	151	92	134	92
Rubber and waterproof goods	222	991	164	682	136	695	56	83	48	78
Ammunition and explosives	3,376	39,770	2,747	13,576	2,344	12,592	469	554	448	512
Leather, boots and shoes	254	325	240	146	113	90	69	34	62	25
Leather, excluding boots and shoes	192	743	150	293	78	234	41	123	30	95
Total	61,154	68,388	64,853	35,213	42,675	33,914	4,747	2,479	4,289	2,237
Total, males and females.	129,542		100,066		76,589		7,726		6,526	
4 weeks ending Sept. 7, 1917	108,899		79,942		63,887		5,518		4,815	

[1] Occupations are grouped according to the industry with which they are mainly connected, and applicants are registered according to the work desired by them.

B.—Uninsured trades.

Occupation group.[1]	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Mining and quarrying	390	13	435	22	275	13	23	4	24	5
Textile:										
Cotton	501	2,114	484	799	194	484	123	139	90	94
Wool and worsted	205	398	261	188	143	147	63	87	50	58
Silk, flax, linen, etc	254	1,624	333	654	145	504	162	298	114	208
Dress:										
Tailors and tailoresses	161	818	139	518	21	395	43	211	28	164
Dressmakers and milliners	.....	639	.....	286	.....	156	.....	298	.....	171
Seamstresses	.....	1,204	.....	601	.....	490	.....	248	.....	193
Others	95	1,503	52	822	22	809	40	162	20	147
Conveyance of men, goods, etc.:										
On railways	203	361	530	231	284	186	144	4	114	1
On roads, seas, rivers, etc.	10,601	3,825	7,143	1,327	4,911	1,124	2,941	1,581	2,081	1,047
Agriculture:										
Fruit, etc., pickers	284	1,418	167	800	266	860	.....	.....	.....	.....
Others	805	1,576	861	1,346	309	896	205	77	139	71
Paper, prints, books and stationery	210	870	345	680	140	558	247	537	166	403
Wood, furniture, fittings, etc.	17	98	98	74	16	70	118	77	88	66
Pottery and glass	117	271	228	121	60	81	77	74	73	46
Food, tobacco, drink, and lodging:										
Bread and biscuit, etc, makers	176	336	164	304	44	262	84	195	58	176
Waiters	116	2,126	99	1,076	48	816	11	55	7	44
Others (jam, cocoa, tobacco, etc.)	166	891	351	851	166	738	108	272	82	238
Brushes, brooms, etc	6	37	22	55	9	18	19	41	16	22
Gas, water, electrical supply, and sanitary service	70	70	867	153	391	119	22	.....	22	.....
Commercial and clerical	4,077	11,708	1,779	3,993	1,131	3,266	1,092	1,453	827	1,252
Domestic:										
Laundry and washing service		1,086		1,194		880		129		86
Private indoor servants		2,412		3,040		781		354		142
Other indoor servants	1,692	8,520	1,648	6,518	754	4,210	593	449	380	280
Charwomen, day girls, day servants		15,423		9,302		7,477		1,551		835
Others		487		275		207		37		25
General laborers	13,827	12,006	5,495	964	4,661	861	768	588	679	519
Shop assistants	552	4,427	340	828	110	483	238	820	134	570
Government, defense, and professional	1,330	6,078	888	1,415	602	1,343	167	378	144	328
All others	1,719	12,252	889	318	482	249	2,500	915	2,272	803
Total	37,574	94,591	23,618	38,755	15,184	28,483	9,788	11,034	7,608	7,994
Total, males and females	132,165		62,373		43,667		20,822		15,602	
4 weeks ending Sept. 7, 1917	108,134		50,348		35,693		16,723		13,059	
Casual employment (men only)	225		.....		1,838		.....		.....	

[1] Occupations are grouped according to the industry with which they are mainly connected and applicants are registered according to the work desired by them.

This table shows that, during the period, in the insured trades 129,542 adults registered for work—61,154 men and 68,388 women. There were 107,292 vacancies reported—64,853 men, 35,213 women, 4,747 boys, and 2,479 girls. The number of positions filled was 83,115—42,675 men, 33,914 women, 4,289 boys, and 2,237 girls. The occupation groups in which the largest numbers of positions were

filled by adults were: Ammunition and explosives, 14,936; laborers, engineering, 10,946; metal machinists, 9,577; works of construction, 6,388; erectors, fitters, and turners, 6,240; other skilled occupations, engineering, 4,671; laborers, building, 4,368.

In the uninsured trades there were 132,165 registrations—37,574 men and 94,591 women. The number of vacancies reported was 83,195—23,618 men, 38,755 women, 9,788 boys, and 11,034 girls. The total number of positions filled was 59,269—15,184 men, 28,483 women, 7,608 boys, and 7,994 girls. The occupation groups in the uninsured trades in which the largest numbers of positions were filled by adults were: Domestic service, 14,309; conveyance of men, goods, etc., 6,505; general laborers, 5,522; commercial and clerical, 4,397.

The totals show that the number of positions filled by adults in both the insured and the uninsured trades during the five weeks ending October 12, 1917, was 20.8 per cent greater than during the preceding four weeks. The number of positions filled by men was 29.7 per cent greater and by women 13.5 per cent greater. Much the largest number of women were employed in the manufacture of ammunition and explosives and in domestic service.

No comparison can be made of the number of registrations in the employment exchanges of Great Britain with the number of applications for work reported by the employment offices of the United States, owing to the differences in method of registering applicants. It is possible, however, to make a comparison of positions filled by the offices in the two countries. The figures show the following results:

	Number of offices.	Positions filled.		
		Total.	Average per day.	Average per day each office.
Great Britain	383	142,384	4,746	12.4
United States	138	99,723	3,989	28.9

The above figures are significant in view of the fact that a very large percentage, if not practically all, of the employment office work of Great Britain is done through the free employment exchanges, while in the United States but a very small proportion of the placements is made through the public employment offices, the much greater proportion being handled by the private employment agencies.

LABOR ORGANIZATIONS.

THIRTY-SEVENTH ANNUAL CONVENTION OF THE AMERICAN FEDERATION OF LABOR.

In some respects, chiefly owing to labor conditions as affected by the war, the thirty-seventh annual convention of the American Federation of Labor, held at Buffalo, November 12 to 24, 1917, inclusive, was the most important gathering of representatives of organized labor ever held in this country. For the first time in its history the federation was addressed by the President of the United States, excerpts from whose address are noted hereafter.

The report of the executive council showed an unusually successful year for the federation. At September 30, 1917, the total membership was 2,371,434, an increase of 14.4 per cent over the preceding year, affiliated with 26,761 local unions in 111 national and international unions and 845 local trade and Federal local unions. The treasurer reported receipts amounting to $412,047.76 and expenditures amounting to $402,440.40, with a cash balance on hand, September 30, 1917, of $98,967.84. Five hundred and fifty-nine charters were issued to national and international, central, local trade, and Federal labor unions. In reporting the distribution of benefits to members it is explained that in every trade local unions have existed prior to the formation of the international union, and almost without exception they provide death, sick, out-of-work, etc., benefits for their members. In these instances benefit features have thus become identified and recognized as belonging to the jurisdiction of the local union. The amounts given hereafter as having been expended by the international unions on account of various benefits in the past year are, in the majority of cases, those paid directly by the internationals, and therefore the totals represent but a small proportion of the aggregate sum paid by trade-unions in the way of benefits. In most instances benefits paid by internationals are supplemental relief paid to members in addition to the benefits provided by their local unions. The benefits paid to members by affiliated organizations during the year were as follows:

Death benefits	$3,034,586.36
Death benefits, members' wives	77,423.50
Sick benefits	838,606.91
Unemployed benefits	30,316.43
Traveling benefits and tool insurance	4,136.71
Total	3,985,069.91

Reports from 75 national and international organizations and from local unions directly affiliated with the American Federation of Labor show that there were 1,417 strikes in which 194,802 people were involved, the cost of these strikes being $2,291,086.85, to which should be added $139,846.26 given by unions for financial assistance to other unions. As a result of demands, 215,019 persons secured improved conditions; 897 strikes were won, 120 were compromised, 86 were lost, and 314 were pending at the close of the year.

In the report of the executive council much attention was devoted to the war, satisfaction being expressed at the representation which labor has been accorded on Government boards. Commenting upon the benefits to labor derived through agreements with the Government, which are set forth at length, the council said:

> It is with great gratification we report specific developments showing that the American labor movement has secured the best agreements with the Government that have been secured in any other warring countries. The agreements and the relations between the workers and the American Government established a new period in the industrial world—a period in which the Government has sanctioned standards based upon principles of human welfare and has substituted these standards for the old system under which profits were paramount.

Further continuing its discussion of the war and its relation to labor the council urged the adoption of the following declarations as the basis upon which peace must be negotiated:

> 1. The combination of the free peoples of the world in a common covenant for genuine and practical cooperation to secure justice and therefore peace in relations between nations.
>
> 2. Governments derive their just power from the consent of the governed.
>
> 3. No political or economic restrictions meant to benefit some nations and to cripple or embarrass others.
>
> 4. No indemnities or reprisals based upon vindictive purposes or deliberate desire to injure, but to right manifest wrongs.
>
> 5. Recognition of the rights of small nations and of the principle "No people must be forced under sovereignty under which it does not wish to live."
>
> 6. No territorial changes or adjustment of power except in furtherance of the welfare of the peoples affected and in furtherance of world peace.
>
> In addition to these basic principles which are based upon declarations of our President of these United States, there should be incorporated in the treaty that shall constitute the guide of nations in the new period and conditions into which we enter at the close of the war the following declarations, fundamental to the best interests of all nations and of vital importance to wage earners:

1. No article or commodity shall be shipped or delivered in international commerce in the production of which children under the age of 16 have been employed or permitted to work.

2. It shall be declared that the basic workday in industry and commerce shall not exceed eight hours.

3. Involuntary servitude shall not exist except as a punishment for crime whereof the party shall have been duly convicted.

4. Establishment of trial by jury.

An extended account of the visit of the British labor commission to this country is included in the report of the council, which also devoted considerable space to mention of the organization of the American Alliance for Labor and Democracy. This subject was discussed in its various phases during an entire session on the seventh day of the convention, and following the debate that portion of the council's report recommending full indorsement of "the patriotic work which has been undertaken" by that organization was adopted by a vote of 21,602 to 402, being the only occasion on which there was a line up by vote on a war question. Some of the other matters touched upon in the executive council's report were labor legislation, compulsory arbitration laws, the eight-hour day, high cost of living, the President's commission to investigate labor conditions on the Pacific coast and in the Mountain region, distribution of labor, and women in industry.

The President of the United States addressed the federation at the opening session. In his remarks President Wilson dwelt upon labor's relation to the great struggle, suggesting that the duty of all Americans is to "stand together night and day until the job is finished." In part, the President said:

If we are true friends of freedom of our own or anybody else's, we will see that the power of this country and the productivity of this country is raised to its absolute maximum, and that absolutely nobody is allowed to stand in the way of it. When I say that nobody is allowed to stand in the way I do not mean that they shall be prevented by the power of the Government, but by the power of the American spirit. Our duty, if we are to do this great thing and show America to be what we believe her to be—the greatest hope and energy of the world—is to stand together night and day until the job is finished.

While we are fighting for freedom, we must see among other things that labor is free, and that means a number of interesting things. It means not only that we must do what we have declared our purpose to do, see that the conditions of labor are not rendered more onerous by the war, but also that we shall see to it that the instrumentalities by which the conditions of labor are improved are not blocked or checked.

Nobody has a right to stop the processes of labor until all the methods of conciliation and settlement have been exhausted. And I might as well say right here that I am not talking to you alone. You sometimes stop the courses of labor, but there are others who do the same; and I believe that I am speaking

from my own experience not only but from the experience of others when I say that you are reasonable in a larger number of cases than the capitalists.

Moreover, a settlement is always hard to avoid when the parties can be brought face to face. I can differ from a man much more radically when he is not in the room than I can when he is in the room, because then the awkward thing is he can come back at me and answer what I say. It is always dangerous for a man to have the floor entirely to himself. Therefore, we must insist in every instance that the parties come into each other's presence and there discuss the issues between them and not separately in places which have no communication with each other.

Fraternal delegates from the British Trades Union Congress, John Hill and Arthur Hayday, and fraternal delegate William Lodge, from the Canadian Trades and Labor Congress, made addresses which were confined largely to war conditions among working classes of their respective countries. Maj. R. Réquin, member of the French general staff, and François Monod, chief of cabinet to the French High Commission in the United States, also spoke to the delegates, each dwelling upon the democratic organization of the French Army and the tendency toward democracy throughout French State organizations generally.

At the opening of the congress a telegram from Hon. W. B. Wilson, Secretary of the United States Department of Labor, was read as follows:

I regret that the pressure of public business prevents my being present at the Buffalo convention of the American Federation of Labor. Please permit me to express my highest appreciation and warmest thanks for the splendid work you have been and are doing for your country and the toiling masses in the hour of our Nation's need. As you know, I have been a trade unionist for nearly half a century. I have been in the heat of the struggle during all of that time and I thank God we have a country where we can struggle within the limitations and rules laid down by laws of our own making for our own guidance. In other countries they have not that privilege. And if the power of the kaiser is imposed upon us, those of us who have struggled during all these years will have lost that which we struggled for, and lost far more than that, the privilege of struggling in a legitimate and honest way. To me the one prime necessity is to lay aside our family quarrels until we have disposed of the enemy from without.

Convey to the convention my best wishes and my profound faith that its action at this time will demonstrate to the world that labor is awake to the necessity of preserving institutions which will enable it to work out its own destiny.

About 180 resolutions were offered, many referring to matters of organization, of "jurisdiction" between unions, of grievances, and of conditions of employment. A special committee was appointed by the convention to report upon the alleged scarcity of labor throughout the country. This committee's report, containing substances of reports from more than 100 central labor unions and international trade-unions, together with testimony from other sources,

was to the effect that there is an enormous reservoir of unemployed or partially employed labor in the country taken as a whole, while in certain localities and especially in certain war services there is more or less of a shortage.

Space can not be devoted to a summary or even mention of all the resolutions adopted by the convention, but reference to the subject matter of a few of the more important seems justified:

Resolutions Nos. 23 and 133 recommend pensions for public-school teachers in the District of Columbia.

Resolution No. 38 calls attention to "the reactionary attitude" of the Washington State Supreme Court in rendering a decision which it was declared amounted to a direction to all lower courts to enjoin all strikers who engage in picketing, peaceful or otherwise, singly or in groups, and which subjects all union members to liability for damages. In this connection the convention reaffirmed the following declaration made a year ago:

> That any injunction dealing with the relationship of employer and employee, and based upon the dictum "labor is property," be held and absolutely treated as usurpation, and disregarded, let the consequences be what they may.

Resolutions Nos. 41 and 53 call for increases of wages of Government employees.

Resolution No. 48 calls for a reduction in nightwork in the Postal Service, and resolution No. 51 calls for "an equitable retirement law for superannuated Government employees."

Resolution No. 50 provides for organizing the Mexican workers in the United States.

Resolution No. 55 asks Congress to provide for the retention of the civil-service status of officers of unions affiliated with the American Federation of Labor and their reinstatement in the service in the same position and at the same salary as they enjoyed when they left the Government service. The resolution was referred to the president of the American Federation of Labor for such action as seems to be appropriate to carry out its purpose.

Resolution No. 59 opposes the employment of children under 16 years of age.

Resolution No. 60 would bring all railroad employees under the provisions of the Adamson law.

Resolution No. 69 calls for abolition of private employment bureaus and the employment of labor through a national free employment bureau of the Department of Labor.[1] This was referred to the executive council with instructions to submit a report at the next conven-

[1] The creation of such a bureau is recommended in the report of the Secretary of Labor, noted on pp. 40 to 47.

tion, recommending how the purpose of the resolution may be effectuated.

Resolution No. 90 calls for a bill providing a 48-hour week for women and minors employed on products which enter into interstate commerce.

Resolution No. 113 demands the right of employees to a hearing and an appeal from the judgment of officials in cases involving demotion or dismissal.

Resolution No. 122 calls for the appointment of experienced women organizers for the purpose of bringing into the unions the women called to war work. This matter was referred to the executive council for appropriate action.

Resolution No. 128 favors home rule in the District of Columbia.

Resolution No. 140 favors the introduction in Congress of a bill establishing Government ownership of the street railways of the District of Columbia.

Resolution No. 141 reaffirms the federation's "consistent stand in favor of woman suffrage," and demands "that Congress * * * shall submit to the States the Federal woman suffrage amendment."

Resolution No. 144 places the federation "on record as being in favor of legislation or the entering into of treaties with our allies that will compel these aliens to bear arms in defense of our country, or to join the forces of their own country, or to be deported from our country."

Resolution No. 154, relating to the training of men for emergency war service, agreements as to their wages and hours, and to an emergency labor supply commission connected with the Department of Labor, was adopted upon approval by the committee on resolutions, which recommended that the matter be referred to the executive council with instruction to cooperate with the presidents of affiliated organizations in working out such problems, relative to the distribution of labor to be employed upon war material, as will arise, and confer with the Government in connection with the development of the national employment bureau.

Resolution No. 157 demands the amendment of the naturalization laws so that foreign-born loyal residents who have entered our Army or Navy shall be granted full citizenship.

Resolution No. 165 approves the resolution pending in Congress prohibiting the United States Supreme Court from declaring unconstitutional laws passed by Congress.

Resolution No. 173 protests against any proposed attempt to import Chinese coolies to work as farm hands or otherwise in America.

The committee on resolutions reported in favor of the daylight saving movement, and the convention approved.

The convention restated the federation's position with regard to vocational and prevocational training which "shall be for educational purposes only, and under no circumstances shall it be commercialized through the manufacture of products for sale."

The following is the text of resolution No. 175 adopted at the close of the convention:

Resolved, That we, the delegates to this thirty-seventh annual convention of the American Federation of Labor, herewith and hereby convey to the Hon. Woodrow Wilson, President of the United States, our profound appreciation of his presence upon the opening day of the convention and for the direct frankness with which he addressed us.

Resolved, That there is particular gratification in the fact that the first President of the United States to honor and inspire by his presence a convention of the American Federation of Labor should be so staunch a defender and so able an interpreter of the fundamental principles of practical democracy.

Resolved, That after sober, serious-minded consideration of the industrial problems arising as the result of our country's participation in the war for human rights and the perpetuation of democratic institutions, we pledge to him our undivided support in carrying the war to a successful conclusion, in supporting him in his efforts to apply the principles of democracy to the solution of the problems which arise in industry, and in conducting the war so that it shall be a war of the people, continued in defense of the fundamental institutions for human liberty transmitted to us by the forefathers of our country.

The committee on international relations submitted an extended report. One of its declarations was:

We concur in the action of the executive council in refusing to be led into a premature peace conference, whether emanating from Germany or originating with her sympathizers here or elsewhere, and congratulate them upon their sagacious judgment in refusing to participate or become involved in any schemes of this character.

The members of the executive council of the federation were reelected, with one exception. Daniel J. Tobin was elected treasurer to succeed John B. Lennon.

President	Samuel Gompers.
First vice president	James Duncan.
Second vice president	James O'Connell
Third vice president	Joseph F. Valentine.
Fourth vice president	John R. Alpine.
Fifth vice president	H. B. Perham.
Sixth vice president	Frank Duffy.
Seventh vice president	William Green.
Eighth vice president	W. D. Mahon.
Treasurer	Daniel J. Tobin.
Secretary	Frank Morrison.

The next convention will be held at St. Paul, Minn., beginning the second Monday in June, 1918.

UNIONIZING EMPLOYEES UNDER CONTRACT DECLARED ILLEGAL BY UNITED STATES SUPREME COURT.

An important decision of the Supreme Court, rendered December 10, 1917, brings to an end a protracted discussion as to the rights of union organizers to carry on their work among workmen under contract to maintain nonunion conditions. The net effect appears to be that outside parties, whether or not they be organizers of labor unions, may be prevented from interfering with a contract of employment under which the employees have agreed not to join a union during the service, and the employer has agreed that the establishment shall be maintained as an open shop; and this although the contract of employment is not for a definite term, but at will. The case (Hitchman Coal & Coke Co. *v.* Mitchell et al.) arose out of conditions and occurrences in the coal mines of West Virginia, and has been in the courts since 1907, when a temporary restraining order was granted on the petition of the company, this order to be in force until the next regular term of court in January, 1908. After some postponements the defendants announced that they "did not desire to be heard in opposition to said motion so far as the granting of a temporary injunction at the time was concerned, and not consenting, but objecting thereto." A temporary injunction was thereupon immediately granted in the terms of the restraining order, and the next step was a motion on the part of the defendants to dissolve the injunction in so far as it restrained them, or any of them, from the use of argument, reason, and persuasion to induce the employees of the plaintiff company, or any of them, to become members of the United Mine Workers of America, or any of its subordinate branches; also in so far as it restrained them from interfering with or talking to employees or prospective employees, to secure their membership, in a peaceable and law-abiding manner, without intimidation, force, threat, violence, or coercion. Other points objected to were the prohibition against visiting the homes of plaintiff's employees or going near the premises of the plaintiff for the purpose of inducing workmen to become members of the union, and forbidding attempts at unionizing the plaintiff's mine, "if by unionizing is meant action on the part of the defendants to induce the employees of plaintiff to become members of the United Mine Workers of America by the use of argument, persuasion, and reason, unaccompanied by force, violence, coercion, or intimidation. This motion was argued on April 7, 1909, and was decided in September of the same year, Judge Dayton delivering the opinion, which is reported in 172 Federal Reporter, page 963. The injunction was continued without modification, the court pointing out that "The right of labor to organize

for mutual benefit and protection is as well settled and determined by law as the right of capital to organize for the same purpose." The solicitation of membership was also held legal as a general proposition, and the right of employees to leave service, whether individually or collectively. In the case in hand, however, it was held that the fact that there was no controversy between the plaintiff and his employees, that there was between them a contract to maintain an "open shop," and no strike was desired or threatened by them, removed this case from the field of controversy affecting the rights of members of unions. "It is not a case where the labor union has longer any legitimate interest or concern."

From this decision an appeal was taken to the circuit court of appeals, which was, however, dismissed in March, 1910, for want of jurisdiction. The case was then taken up before the district court for final hearing. A great bulk of evidence was submitted with extensive briefs, and Judge Dayton himself prepared an opinion going at great length into the history of labor organizations and the principles governing their activities. The opinion recited in detail the history of the difficulties which had attended the operation of the mine from its beginning, including the period when it was run as a closed union mine, during which time three strikes were called involving in all a loss of approximately $50,000 and a full half year of working time. In this opinion the union was declared to be a combination in restraint of trade under the common-law doctrines of conspiracy, as well as a violation of the Sherman antitrust law, and the injunction was made perpetual (202 Fed. 512).

The case was then taken to the circuit court of appeals, where the decision of the court below was reversed and instructions were given to dismiss the suit (May, 1914, 214 Fed. 685); but this order was stayed pending an application to the Supreme Court of the United States for a writ of certiorari. The circuit court of appeals afterwards allowed an appeal, which the Supreme Court dismissed, but granted the writ of certiorari.

Mr. Justice Pitney delivered the opinion of the court, from which three justices dissented. The history of the case is given with considerable fullness, including an account of the original difficulties which led to the determination to operate the mine under nonunion conditions, with individual contracts with each employee, by which it was agreed that during his term of employment the mine should be nonunion, and that if he desired to join a union he was free to do so, though the action would amount to a termination of his contract of employment with the company. Similar agreements were made with reference to the Glendale mine, operated by the same management as the Hitchman; another mine a few miles north was

likewise run nonunion. The motives that led the United Mine Workers of America to desire especially the unionization of the mines in this so-called Panhandle district of West Virginia were developed by quotations from the minutes of the annual international convention of the U. M. W. A. held in January, 1907, at which time the method of unionizing that had been in use was approved, it being agreed that this field "would not be thoroughly organized except as the result of a successful strike." The methods of the organizer sent into the field were described, the plan being to secure agreements from individual miners that they would join the organization, the organizer at one time stating that "they had 60 men who had signed up or had agreed to join the organization at Hitchman, and that they were going to shut the mine down as soon as they got a few more men." It was known to this organizer, Hughes by name, that membership in the union was inconsistent with the terms of employment at the three mines named above, and a violation of express provisions of the contract of employment at the Hitchman and Glendale mines. Furthermore, "there is clear and uncontradicted evidence that he did not confine himself to mere persuasion, but resorted to deception and abuse." Such activities continued until it became possible to shut down the Richland mine, and it remained closed until a restraining order was allowed by the court, after which it immediately resumed operations as a nonunion mine.

In view of these facts and others cited, the court found that "if there be any practical distinction between organizing the miners and organizing the mine it has no application to this case. * * * The evidence shows, without any dispute, that defendants contemplated no halfway measures, but were bent on organizing the mine, the 'consent' of plaintiff to be procured through such a control of its employees as would render any further independent operation of the mine out of the question."

In view of the facts recited, which "are either admitted or else proved by clear and undisputed evidence and indubitable inferences therefrom," the question remained as to their legal consequences. It was first pointed out that there was no question that the plaintiff company "was acting within its legal rights in employing its men only upon terms of continuing nonmembership in the United Mine Workers of America. * * * The same liberty which enables men to form unions and through the union to enter into agreements with employers willing to agree, entitles other men to remain independent of the union and other employers to agree with them to employ no man who owes any allegiance or obligation to the union. * * * Plaintiff, having in the exercise of its undoubted rights established a working agreement between it and its employees, with the free as-

sent of the latter, is entitled to be protected in the enjoyment of the result of the status as in the enjoyment of any other legal right."

It was pointed out that the fact that the employment was at will and terminable by either party at any time was of no consequence, Mr. Justice Pitney quoting from an opinion in a somewhat earlier case, Truax *v.* Raich (239 U. S. 33), in which it was said that "the fact that employment is at the will of the parties, respectively, does not make it one at the will of others. * * * The unjustified interference of third persons is actionable, although the employment is at will."

An interesting basis for the views taken was then announced, citing various cases, among them that of Jersey City Printing Co. *v.* Cassidy (1903) (63 N. J. Eq. 759, 53 Atl. 230), in which Vice Chancellor Stevenson had adopted the term "probable expectancies" from an opinion recently delivered by Lord Ellenborough, of the House of Lords, suggesting "that the natural expectancy of employers in relation to the labor market, and the natural expectancy of merchants in respect to the merchandise market must be recognized to the same extent by courts of law and courts of equity." The language used by Mr. Justice Pitney is as follows:

> In short, plaintiff was and is entitled to the good will of its employees precisely as a merchant is entitled to the good will of his customers, although they are under no obligation to continue to deal with him. The value of the relation lies in the reasonable probability that by properly treating its employees, and paying them fair wages, and avoiding reasonable grounds of complaint, it will be able to retain them in its employ, and to fill vacancies occurring from time to time by the employment of other men on the same terms. The pecuniary value of such reasonable probabilities is incalculably great, and is recognized by the law in a variety of relations. (Cases cited.)

Mr. Justice Pitney followed Judge Dayton in declaring that "The case involves no question of the rights of employees. Defendants have no agency for plaintiff's employees, nor do they assert any disagreement or grievance in their behalf. In fact, there is none; but, if there were, defendants could not, without agency, set up any rights that employees might have. The right of the latter to strike would not give to defendants the right to instigate a strike. The difference is fundamental."

Taking up then the claim of the unions to a right to a larger membership by solicitation, it was said that "The right is freely conceded, provided the objects of the union be proper and legitimate, which we assume to be true, in a general sense, with respect to the union here in question." This right was held to be subject, however, to coexisting rights of others, and as every Hitchman miner who agreed to join the union permitting his name to be entered upon the organizer's list was guilty of a breach of his contract, it was de-

termined that the right of solicitation under such circumstances did not exist. A workman making such an agreement was said to have "acted a lie whenever he thereafter entered plaintiff's mine to work. Hughes not only connived at this, but must be deemed to have caused and procured it. * * * True, it is suggested that under the existing contract an employee was not called upon to leave plaintiff's employ until he actually joined the union, and that the evidence shows only an attempt by Hughes to induce the men to *agree* to join, but no attempt to induce them to violate their contract by failing to withdraw from plaintiff's employment after *actually joining*. But in a court of equity, which looks to the substance and essence of things and disregards matters of form and technical nicety, it is sufficient to say that to induce men to agree to join is but a mode of inducing them to join."

That the object in unionizing the men was not to enlarge the membership of the union so much as to secure the organization of the mines was maintained, since "without this, the new members would be added to the number of men competing for jobs in the organized districts, while nonunion men would take their places in the Panhandle mines. * * * In any aspect of the matter, it can not be said that defendants were pursuing their object by lawful means. The question of their intentions—of their bona fides—can not be ignored. It enters into the question of malice. * * * And we can not deem the proffered excuse to be a 'just cause or excuse,' where it is based, as in this case, upon an assertion of conflicting rights that are sought to be attained by unfair methods, and for the very purpose of interfering with plaintiff's rights, of which defendants have full notice. Another fundamental error in defendants' position consists in the assumption that all measures that may be resorted to are lawful if they are 'peaceable'—that is, if they stop short of physical violence, or coercion through fear of it. In our opinion, any violation of plaintiff's legal rights contrived by defendants for the purpose of inflicting damage, or having that as its necessary effect, is as plainly inhibited by the law as if it involved a breach of the peace. A combination to procure concerted breaches of contract by plaintiff's employees constitutes such a violation."

It was further said that if a strike should be called and a complete new gang of men required "there might be a reasonable apprehension of violence at the hands of the strikers and their sympathizers. The disordered condition of a mining town in time of strike is matter of common knowledge. It was this kind of intimidation, as well as that resulting from the large organized membership of the union, that defendants sought to exert upon plaintiff. * * * Upon all the facts, we are constrained to hold that the purpose entertained by de-

fendants to bring about a strike at plaintiff's mine in order to compel plaintiff, through fear of financial loss, to consent to the unionization of the mine as the lesser evil, was an unlawful purpose, and that the methods resorted to by Hughes—the inducing of employees to unite with the union in an effort to subvert the system of employment at the mine by concerted breaches of the contracts of employment known to be in force there, not to mention misrepresentation, deceptive statements, and threats of pecuniary loss communicated by Hughes to the men—were unlawful and malicious methods, and not to be justified as a fair exercise of the right to increase the membership of the union."

It was held, therefore, that the plaintiff was entitled to relief by injunction as to the defendants who answered, while as to others named as defendants, but not served with process, the decree of the district court was held to be erroneous. The injunction as issued by Judge Dayton was sustained in so far as it restrains interfering or attempting to interfere with the company's employees for the purpose of unionizing the mine without its consent, or restrains the knowing and willful bringing about of the breaking of contracts by the plaintiff's employees, the trespassing on the grounds or premises of the plaintiff for the purpose of interfering therewith or hindering or obstructing its business, "or with the purpose of compelling or inducing, by threats, intimidation, violent or abusive language, or persuasion, any of plaintiff's employees to refuse or fail to perform their duties as such." Similar interference with prospective employees was also restrained, except as to the use of the word "persuasion."

Inasmuch as there was no evidence of picketing or acts of physical violence, an injunction against these forms of interference was held not to be warranted, and these were directed to be eliminated from the injunction, unless proof should be offered to the effect that their inclusion was warranted.

A dissenting opinion prepared by Mr. Justice Brandeis was concurred in by Mr. Justice Holmes and Mr. Justice Clarke. Much of the evidence adduced in the final hearing before the district court and reviewed in the opinion of the Supreme Court was declared not to be admissible, on the ground that there was no foundation for the conspiracy charged, though the majority opinion recited it as indicating the cooperation of the various agencies and the purpose of the specific activities engaged in. In his opinion Mr. Justice Brandeis took up some points in the opinion of Judge Dayton which were not touched upon in the majority opinion, as the alleged illegality of the United Mine Workers of America under the law of West Vir-

ginia and under the Federal antitrust act. He then reached the conclusion that there was no conspiracy proved against the West Virginia mines, nor was there any undertaking to unionize the plaintiff's mine without its consent, citing the testimony of a witness that "Under the constitution and methods of the United Mine Workers, a mine can not be organized without its consent, and it is not the object or purpose of the United Mine Workers to do so, and never has been." It was also maintained that there was no attempt to induce employees to violate their contracts, and that an agreement on the part of the employee to join the union did not call upon him to leave the plaintiff's employ. He also maintained that "merely persuading employees to leave the plaintiff's employ or not to enter it was not unlawful," and further that there was no "threat, violence, or intimidation."

When this suit was filed no right of the plaintiff had been infringed and there was no reasonable ground to believe that any of its rights would be interfered with; and, in my opinion, the circuit court of appeals properly reversed the decree of the district court, and directed that the bill be dismissed.

Another opinion which was delivered on the same day involved very similar principles, the plaintiff being the Eagle Glass & Manufacturing Co., in court for the purpose of the maintenance of an injunction granted against the American Plate Glass Workers' Union and its officers and members to prevent attempts to unionize its factories. The same court of appeals had passed upon this case as passed upon the Hitchman case, and it directed the dissolution of a temporary injunction that had been issued, and the dismissal of the bill, saying that "All the questions involved in the merits of the appeal were decided adversely to the appellee by this court in Mitchell *v.* Hitchman Coal & Coke Co. (214 Fed. 685)." For the same reasons as given in the Hitchman case, Justice Pitney ruled that the plaintiff was entitled to be protected by law from interference with the good-will of its employees, that outside parties were not interested and had no right to instigate a strike, and that the methods used were not lawful. The use of money by the organizer and threats to use dynamite were differences in circumstances, but otherwise the cases were practically identical. The decision of the court of appeals dissolving the temporary injunction was affirmed, on the ground of insufficient evidence to sustain the charges of the plaintiff, but in so far as a dismissal of the appeal had been directed, that decision was reversed, and the case remanded to the district court for further proceedings in conformity with the opinion of the Supreme Court. Here, also, Mr. Justice Brandeis dissented, Justices Holmes and Clarke joining in the dissent, the reasons being the same as those stated in the Hitchman case.

TRADE-UNIONS IN THE GOVERNMENT SERVICE.

The annual report of the Postmaster General for the fiscal year 1917 discusses at considerable length the history and policy of permitting organization of postal employees. He characterizes many of the grievances of organized postal employees as "imaginary," and declares that the service—citing a special instance—suffers generally from "too much unionism." The activities of postal employees in attempting to influence legislation in their behalf, he states, have resulted in embarrassment to the department. He reviews the history of the order of 1895 which attempted to prohibit, under penalty of dismissal, postal employees from visiting Washington for the purpose of influencing legislation; and of the later order of 1902, issued by President Roosevelt, forbidding all officers or employees of the United States, individually or through associations, to solicit an increase of pay, or to influence in any way matters of legislation. He favors the repeal of the provision of the act of August 24, 1912, which removed the above disabilities and permits postal employees to organize in so far as such organizations do not obligate their members to engage or assist in a strike against the United States. These organizations, he concludes, "are fast becoming a menace to public welfare and should no longer be tolerated."

The Postmaster General, on the other hand, recognizes the necessity for employees in private industries "to protect themselves against the selfishness of private employers;" but in the Government service the conditions are different, he contends. "The relations between the employee and the Government are always matters of public information, and the interests of the employee will always be protected by public sentiment. * * * [Employees] can always depend upon public opinion to insure their enjoyment of their full rights under their employment."

The following is quoted at length from the report in question:

The need for this cooperation was never greater than at the present time, when the Nation is engaged in a world war to maintain the right of liberty and self-government. The success of this war will depend, to a large extent, upon the closest cooperation. All kinds of business and of labor will be severely taxed, and each must make its own sacrifices. It will be necessary for the Nation to furnish its quota of men, and for capital and labor to produce, and to produce quickly, the funds, material, and services necessary for the successful conduct of the war. Great sacrifices will be required, not only of those who go to the front but of capital and of labor as well, and necessarily the interests of the individual must for the time being be subordinated to those of our country. Normal working conditions can not prevail, and the war can not be won nor the world rebuilt under normal conditions. Notwithstanding this fact, and at this critical period in our Nation's history,

it is regrettable to state that the organized postal employees are making many selfish demands and insisting that they shall not be required or permitted to work in excess of the usual number of hours; also that their salaries be permanently increased, although they are justly compensated, receiving more than three times as much as those fighting in the trenches, who must of necessity suffer the hardships of warfare and sacrifice their all if necessary.

Efforts of these organizations along other lines have been severely criticised by men in public life, as they attempt to control political as well as legislative matters and openly boast of the influence they claim to exert in the furtherance of their selfish interests.

An outside organization has during the past several years attempted to unionize Government employees, including those in the Postal Service, and a large number of postal employees are now affiliated with it, and others soon will be, notwithstanding the fact that such affiliation is believed to be contrary to the act of August 24, 1912. The advisability of permitting Government employees to affiliate with an outside organization and use the strike and boycott as a last resort to enforce their demands is seriously questioned by those interested in the public welfare.

Such a policy, however, does not gainsay the propriety of permitting organization for the social benefit of postal employees. The Secretary continues in the following vein:

They should be permitted to form organizations for their social and mutual welfare, appear before committees of Congress when requested, and give any information concerning the Postal Service of which they may have knowledge; but the forming of organizations for other purposes, such as interfering with the discipline and administration of the service, and the control of the election of persons nominated for public office, or enactment of legislation for their selfish interests and not for the welfare of the public, should cease. If by combining Government employees are enabled to unduly influence Members of Congress and others seeking election to public office, the situation will naturally arise, if it has not already arisen, where Congress will be unduly influenced by such combinations, the appropriations for the salaries of such employees will be greatly increased, and economic provision for the conduct of the service impossible. The conduct of these organizations at this time is incompatible with the principles of civil service and with good administration of the Postal Service. They are fast becoming a menace to public welfare and should no longer be tolerated or condoned.

LOSS OF MEMBERSHIP OF AUSTRIAN TRADE-UNIONS DURING THE WAR.[1]

The following statistics illustrate the effect of mobilization upon the membership of Austrian trade-unions. They are reproduced by Vorwärts of September 5 from the report of the Central Federation of Austrian Social-Democratic Trade-Unions for 1916.

[1] The Labour Gazette, London, November, 1917, p. 403.

Year.	Membership at end of year.		
	Males.	Females.	Total.
1913	372,216	42,979	415,195
1914	210,421	30,260	240,681
1915	151,424	25,689	177,113
1916	138,789	28,148	166,937

The loss in membership between 1913 and 1916, taking both sexes together, has been continuous throughout the period covered by these figures, and by the end of 1916 amounted to 248,258, or 60 per cent. The number of male members during the same period declined by 233,427, or 63 per cent, principally owing to men being called up for military service.

By the end of 1915 the number of unionists called up was about 200,000. Since then the extension of military age (in 1916) from 42 to 50 has caused the loss of several thousand members, while the constant enrollment of younger men and the comparatively few discharges from the army have also combined to reduce the membership. The writer in Vorwärts expresses the opinion that the number of men called to the colors far exceeds the loss of membership.

WORKMEN'S COMPENSATION AND SOLDIERS' PENSIONS.

FIRST ANNUAL REPORT OF UNITED STATES EMPLOYEES' COMPENSATION COMMISSION.

On September 7, 1916, Congress enacted a law providing compensation for all civil employees of the United States suffering injuries while in the performance of their duties. This law superseded the limited workmen's compensation act of 1908 and its subsequent amendments. An Employees' Compensation Commission was also created to administer the new law, except that the administration of the act was transferred to the Governor of the Panama Canal and to the Alaska Engineering Commission as regards employees under their respective jurisdictions.

The commission has just issued its first annual report reviewing the operation of the law from the date of its enactment (Sept. 7, 1916) to June 30, 1917.

PROVISIONS OF THE ACT.

The Federal act provides compensation for all personal injuries causing death or resulting in disability of more than three days and covers all civil employees of the United States. The compensation scale is 66⅔ per cent of wages, the maximum wage, for the purpose of computing compensation, being limited to $100 a month. Payments continue during disability and in fatal cases until the death or remarriage of the widow. Reasonable medical and hospital services are furnished in addition to compensation benefits. Such services are provided by the United States medical officers and hospitals wherever practicable. The burden of payment is borne by the Federal Government through a special compensation fund appropriated by Congress.

COMPENSATION COSTS.

The amount paid out in compensation benefits and medical services during the period covered by the report was as follows: United States Employees' Compensation Commission, $122,806.07; Panama Canal, $29,806.73; Alaska Engineering Commission, $7.317.31; total, $159,930.11. The amount paid out by the United States Employees' Compensation Commission, however, does not show the total losses

incurred during this period. It covers only those cases which had been approved by the commission at the close of the period and includes only two of the 121 fatal cases reported.

INJURIES REPORTED.

The injuries reported to the commission during the period September 7, 1916, to June 30, 1917, numbered 7,832, of which 121 were deaths, 5,697 resulted in disability of over three days, 718 resulted in disability of from one to three days, while the remainder include those in which no time was lost except on the day of injury and those in which the particulars received were not sufficiently complete for tabulation.

The following table shows the tabulatable injuries for each department and establishment classified by extent of disability:

NUMBER OF INJURIES BY EXTENT OF DISABILITY FOR EACH DEPARTMENT OR ESTABLISHMENT, SEPT. 7, 1916, TO JUNE 30, 1917.

Department or establishment.	Total injuries.	Number of injuries resulting in—					
		Death.	Temporary disability of—				
			Over 1 to 3 days.	Over 3 to 7 days.	Over 7 to 14 days.	Over 14 to 28 days.	Over 28 days.
Agriculture	105	5	18	20	21	21	18
Commerce	110	14	12	24	21	19	20
Interior	229	9	22	28	58	62	50
Justice	.....	.....	.....	.....	.....	.....	.....
Labor	15	.....	2	3	3	2	5
Navy	2,805	20	195	650	671	763	506
Post Office	1,289	24	108	203	282	275	397
State	1	.....	.....	.....	.....	.....	1
Treasury	222	4	60	53	32	37	36
War	1,704	43	299	385	316	363	298
Government Printing Office	57	1	2	14	18	10	12
Other	1	1	.....	.....	.....	.....	.....
Total, all departments	[1] 6,536	121	718	1,380	1,422	1,552	1,343
Panama Canal	1,209	31	397	279	213	167	[2] 122

[1] This total does not agree with the sum of the items shown.
[2] Including 5 cases of permanent partial disability.

The commission has ruled that occupational diseases as well as accidents are compensable under the Federal law. In view of this fact it is of interest to note that of 6,760 injuries tabulated as to nature of injury nearly 60 were of this character. This number included 23 cases of lead poisoning, 2 of which were fatal; 16 cases of dermatitis and conjunctivitis from fulminate of mercury; 2 cases of brass poisoning; 2 cases of acid poisoning from acid fumes; 2 cases of creosote poisoning; and single cases of dermatitis from acid, and from benzine irritation, bronchitis and laryngitis from acid fumes, dermatitis from cement water, eczema of the hands from potassium

bichromate, temporary paralysis of the right arm from use of the pneumatic hammer, zinc poisoning from fumes given off in welding galvanized iron, and typhoid fever from handling typhoid bacilli in making vaccine.

ACCIDENT PREVENTION.

The law makes no specific provision for accident-prevention work. The commission, however, has recommended that the act be amended to provide for such prevention work and for the appointment of a safety expert. At the outset the commission recognized the necessity of having knowledge of the conditions under which the work in Government establishments was carried on. As the best means to this end the commission accepted the services of the National Safety Council and of the National Museum of Safety for a safety survey of the various Government establishments with the cooperation of the various Government departments and an advisory committee representing them. As a result of this survey safety engineers for all the important navy yards and arsenals have been appointed by the Secretaries of the Navy and of War.

COST OF COMPENSATION DURING 1915–16.

The cost of compensation for the injuries occurring during the period of July 1, 1915, to September 6, 1917, under the act of May 30, 1908, and its amendments, as administered by the Department of Labor and later by the Employees' Compensation Commission, was $518,017.46, paid on account of 3,859 injuries.

The following table shows the number of injuries reported, number of claims paid, and amount of compensation paid, by departments, during this period:

NUMBER OF INJURIES REPORTED AND NUMBER AND AMOUNT OF CLAIMS PAID ON ACCOUNT OF INJURIES OCCURRING DURING PERIOD JULY 1, 1915, TO SEPT. 6, 1917.

Department or establishment.	Number of injuries reported.	Number of claims paid.	Amount of compensation paid.
Agriculture	268	104	$24,184.16
Commerce	163	73	17,681.07
Interior	455	207	32,051.41
Justice			
Labor	14		
Navy	3,295	2,089	265,874.11
Post Office	1,504	[1] 4	[1] 199.10
State			
Treasury	326	106	20,932.51
War	2,395	1,220	151,576.59
Government Printing Office	86	55	5,468.51
Miscellaneous	3	1	50.00
Total	8,509	3,859	[1] 518,017.46

[1] Does not include compensation paid to employees of Panama Canal ($67,036.92) and to employees of Post Office Department ($134,500 appropriated) for fiscal year ending June 30, 1916.

The figures showing number of claims approved are not in agreement in several tables of the report, and other errors of detail are apparent. These discrepancies are in part explainable as clerical or typographical errors which were not discovered in the proof reading; in other instances they can not be so explained.

MILITARY PENSION SYSTEMS IN THE UNITED STATES AND FOREIGN COUNTRIES.

The entrance of the United States into the war immediately brought into relief the inadequacy of our military pension system and the necessity of supplementing existing legislation with a compensation and insurance system adequate to provide for our disabled military forces and take care of their dependents during their period of service. The existing pension laws in the United States were confessedly inadequate to meet the situation developed by the war, and the urgent need for such legislation made an extensive investigation of the systems adopted in foreign countries impossible. To meet the immediate demand for information a compilation and analysis of the pension and insurance laws in operation in some of the more important countries [1] was prepared and published by the Children's Bureau [2] of the United States Department of Labor.

This report briefly summarizes the military pension systems in effect in the several countries and includes the governmental provisions relating to military pay, separation allowances, disability pensions, survivors' or dependents' pensions, retirement and service pensions, insurance, special relief measures, and methods of administration. Each country is treated separately and the various pension schedules of each nation are reproduced with brief descriptions and connotations. Comparative schedules, however, of the several more important provisions have been collated.

Three types of pension laws, says the report, were in existence in the United States at the time of our entrance into the war.[3]

A. The retirement systems of the Army, Navy, Marine Corps, and Coast Guard provide, with certain marked limitations, for officers

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[1] United States, Australia, Austria, France, Germany, Great Britain, Italy, Netherlands, New Zealand, Russia, South Africa, and Switzerland.

[2] United States Department of Labor, Children's Bureau. Governmental provisions in the United States and foreign countries for members of the military forces and their dependents (bureau publication No. 28), 1917, 237 pp.

[3] Since then Congress has enacted a new military compensation and insurance law (Oct. 6, 1917) to meet the situation developed by the war. This law, in providing for separation allowances, compensation in case of disability or death, and in offering Government insurance opportunities, marks a notable departure from the former pension policy of the Government. For a brief summary and text of the new law (Public, No. 90) see MONTHLY REVIEW for November, 1917, pp. 183 to 199.

and men of the regular establishment. Except in the Coast Guard, no allowance is made for an enlisted man who has served less than 30 years.

B. The general pension laws administered by the Pension Bureau of the Department of the Interior, which provide for military and naval officers disabled in the Federal service who are not a part of the regular establishment and, therefore, not eligible for retirement, for enlisted men who are disabled in the Federal service, and for the dependents of officers and enlisted men who are killed in the Federal service, except that widows of officers and enlisted men in the Coast Guard are not eligible for pension.

C. The service-pension laws, also administered by the Pension Bureau, which provide for men who had served in specified wars for specific periods, and for their widows and children, without reference to any disability incurred in the service or to the cause of the death.

A comparison of these American laws with the provisions for soldiers' dependents in certain European countries and British dominions, says the report, reveals various tendencies or types of provision with which American laws have not hitherto been concerned. These tendencies are summarized in the report as follows:[1]

Possibly the most striking difference from American laws is the almost universal provision for separation allowances paid to the families of men on active service. In Great Britain and the British colonies and in Russia an allowance is paid to the wife and children of every enlisted man; in many cases this varies according to the size of the family. Elsewhere such an allowance is granted only in case of need or, as in Holland, the amount is graded not by the size of the family but by its economic status. In addition, Great Britain and the British colonies require allotment to the wife of part of the pay of the enlisted man. Alone among the belligerent countries studied the United States is making no allowance whatever for the families of men in active service; the United States permits but does not require an allotment of pay.[2]

The amounts of the separation allowances vary widely. In Germany, for example, the stated allowance is frankly a minimum, which may be increased for each community at the discretion of the local distributive agencies. In fact, it is frequently supplemented from State or municipal funds. Germany also grades the amount of the income which a family may possess without forfeiting separation allowance according to the type of community in which the family lives. Russia gives the case equivalent or specified food staples and their cash value is determined for each Province separately. Practically every country has increased the amount of its allowances since the outbreak of the war. * * *

Both France and Germany have since the war extended to all wives who are receiving separation allowances the maternity benefits already provided in the German system of social insurance and in France the maternity benefit law of

[1] Pages 26 to 33.

[2] The new military pension act of Oct. 6, 1917, makes provision for separation allowances, and also requires an allotment of pay.

1913. In Great Britain a new provision of the national insurance act requires that every man who joins the army or navy be insured and his premiums deducted from his pay. His wife then becomes eligible for a maternity benefit of 30 shillings ($7.30) for each confinement. In other ways also new efforts are everywhere evident to adapt the allowances and pensions to the actual needs of the situation. For example, the illegitimate child who has been acknowledged by the father is now almost everywhere entitled to benefits, and Great Britain gives the unmarried wife a separation allowance in certain circumstances, provided the man chooses to allot his pay to her. In Germany the unmarried woman is entitled to a maternity benefit if she has already an illegitimate child on whose behalf she is drawing an allowance.

England has recently provided that special allowances may be paid to enable men to meet financial obligations contracted before they entered the service for the following purposes: To buy furniture or real property, to pay rent or taxes, to meet payments on loans or mortgages, or to pay for children's schooling. The need for financial assistance must be proved and the amount paid by the State can not exceed £104 ($506.12) per annum.

Several countries permit the pension for a partially disabled man or for the widow of a man killed in service to be commuted into a lump-sum payment, provided the pensioner can satisfy the authorities that this will better serve his needs. Great Britain, again, and certain of the colonies, make substantial variations in the pensions allowed for total disability according to the number of the man's dependents.

Practically all countries vary their disability pensions and pensions to widows and other dependents of men killed in service according to the military rank of the man. Switzerland, on the other hand, has related her military compensation to her civil insurance scheme and bases the allowances for disability and death on the man's civil earnings up to specified maxima. England allows a disabled man or a widow to receive, under certain conditions, a pension based not on disability but on prewar income. If the enlisted man can prove, for example, that the disability pension, including the additional allowance for children, and his present average earnings amount to less than his prewar earnings, he may be granted a pension which, together with his average earnings, will equal but not exceed his prewar earnings up to a maximum of 50 shillings ($12.17) a week, and half of any prewar earnings between 50 and 100 shillings ($12.17 and $24.33) a week.

The new pension law in Italy and the proposed law in France include detailed categories of injuries which aim to measure the extent of disability not in terms of military usefulness but in terms of civil usefulness and earning power. Fine adjustments of the relation of the injury to the individual's occupation have not been attempted even in Germany. And nowhere are the pensions granted to a disabled man lowered or withdrawn if he is able to increase his earning power by special training.

Various methods have been devised to provide for a disabled man and his dependents during his reeducation. In Canada the disabled man can be reenlisted for industrial training, and during the period of training his family receives allotted pay and separation allowances. Great Britain and Italy enforce plans for reeducation by withholding their part of the pension from a man who refuses to undergo treatment or training certified as necessary for his interest.

The ages up to which children are eligible to pensions or separation allowances vary from 12 years for separation allowances in Italy to 21 years in Great

Britain for pensions to children of soldiers or sailors if they are attending school or receiving technical training. Austria regards as the "normal age" at which allowances and pensions are withdrawn 16 years for boys and 14 years for girls. Germany grants separation allowances only until 15 but pensions until 18 years of age. The new Italian law gives pensions also until 18.

In general, parents or brothers and sisters, are eligible for benefits only in the absence of both widow and children, and only if the parents or brothers and sisters were dependent upon the deceased. Italy's new law includes a generous definition of this dependency and Great Britain has added to the dependency provision the alternative that the deceased son or brother was apprenticed at a recognized trade or receiving training at school or articled for a profession.

The report does not, except in case of the United States, show the number of pensioners in each country nor does it cover the question of cost. Of value also in this connection would be a comparison of the military with the industrial compensation systems, supplemented with a study of the governmental provisions in each country for rehabilitating and reeducating disabled men, industrial as well as military.

OPERATION OF THE PENNSYLVANIA STATE WORKMEN'S INSURANCE FUND IN 1916.

The report of the Pennsylvania State workmen's insurance fund[1] for the year ending December 31, 1916, the first year of its operation, shows a gross income of $885,876.27, of which $785,006.59 represents net premiums, a deduction of $100,869.68 being made for merit rating. It is estimated that the premium income during 1917 will amount to $1,250,000. The expenses of the fund, which are paid by the State until July 1, 1919, were, in 1916, $138,125.24, or 17.6 per cent of the annual premium income.

If this 17.6 per cent ratio had been calculated on the 100 per cent rate basis charged by the casualty companies instead of on a premium income 10 per cent less, for the same business, the annual expense ratio would have been 15.8 per cent. The expense cost is lower than shown by any other compensation insurance carrier operating in Pennsylvania.[2]

According to the report the claim cost, including the setting up of reserves to carry claims to maturity based on estimates set forth by the Pennsylvania insurance department, produces a loss ratio of 69.4 per cent, and it is suggested that if this claim cost is computed on 100 per cent premium rates, as explained in the expense ratio, the result would be a loss ratio of 62.4 per cent, which may be compared

[1] Annual report of the State Workmen's Insurance Fund of Pennsylvania. Harrisburg, [1917]. 29 pp.

[2] The average expense ratio, as taken from the official records of the insurance department, was 35.8 per cent.

to 61.3 per cent given as the average loss ratio for all carriers of compensation in the State during 1916.

Taking up the matter of claims, the report states that 9,407 accident reports were received by the claims division during 1916. Of these 111 were death cases, 40 dismemberment cases, and 2,596 compensable cases other than death and dismemberment. Of the 111 death claims, 64 (58.6 per cent) involved dependency; of the 40 dismemberment cases, 26 (65 per cent) involved loss of eye. At the end of the year compensation was being paid to 12 dependent parents, 37 widows, and 92 orphan children. Reserves to carry all outstanding claims to maturity were set aside and charged against the year's income.

Owing to an increase in the number of accidents and the resulting addition in the cost for insurance, it was found that the initial rates approved by the insurance department were inadequate and on August 1, 1917, an increase of rates became effective to apply to policies written after that date.

The present rate differential of 10 per cent below casualty company rates remains in force and employers insured in the State fund also have the privilege of participating in dividends from profits. With the continuation of such advantages, even with the increase in rates, policyholders in the State fund obtain their insurance much cheaper than it can be obtained from casualty companies.

The State fund declared a dividend on the business transacted in 1916, according to the report, 10 per cent being paid to the group of coal-mine risks and 15 per cent to the group containing all other risks. The amount of this dividend was $93,162.04.

The following statement shows the income and disbursements for 1916:

INCOME.

Premiums written		$764,386.13
Premium audit additions	$163,510.32	
Premium audit reductions	42,020.18	
		121,490.14
		885,876.27
Merit rating reductions	109,949.65	
Merit rating increases	9,079.97	
		100,869.68
		785,006.59
Interest received and accrued on investments and deposits		18,526.31
Total		803,532.90

DISBURSEMENTS.

Losses paid:		
Medical	$51,447.20	
Temporary total	66,315.33	
Dismemberment	5,805.67	
Temporary partial	364.87	
Death dependency	9,362.75	
Funeral expenses	6,840.63	
		$140,136.45
Miscellaneous claim expenses		47.53
Reinsurance and return premiums		19,929.86
Reserves:		
Losses	$404,825.55	
Reinsurance	2,377.35	
Catastrophe	68,049.84	
		475,252.74
Dividends paid to policyholders		93,162.04
Surplus to policyholders		75,004.28
Total		803,532.90

CONSTITUTIONALITY OF COMPENSATION LAW OF HAWAII.[1]

A very unexpected check in the movement for the establishment of the system of compensation for industrial injuries appears in a decision by Judge Ashford of the circuit court for the first circuit of the Territory of Hawaii, this decision being rendered on June 28, 1917. The case was an action for damages brought by one Carroll against the Marconi Wireless Telegraph Co. of America, the complaint charging negligence. The company demurred to the complaint on the ground that the compensation law of the Territory (Act 221 of the Laws of 1915) swept away rights of action previously existing, and substituted a single method for the determination of all cases of this nature. The matter of constitutionality was at once brought into question, and by this court decided adversely, with considerable reference to the position taken by the Court of Appeals of New York in the Ives case (201 N. Y. 271, 94 N. E. 431).

Judge Ashford had withheld judgment until the decision rendered by the Supreme Court of the United States on March 6, 1917, upholding the constitutionality of the compensation laws of Iowa, New York, and Washington, and consideration was given to the opinions in those cases. The court concluded, however, that inasmuch as the Hawaiian statute was a compulsory law, seeking to "wipe out and utterly abolish rights of action by an employee falling

[1] After this summary of the decision declaring the law unconstitutional was put into type information was received that the decision had been reversed. See note on p. 166.

within any of the classes covered by the statute, to recover damages for injuries arising in the course of his employment," there should be such hearings as would fairly and fully compensate for the loss of the right of trial by jury—provisions which the court held to be lacking. It also regarded as distinctly vicious in character the fact that no compensation is to be allowed for an injury caused by the employee's willful intention to injure himself or another, or by his intoxication, while there was no provision such as appears in many of the State statutes permitting suit for damages where the injury results from the willful or malicious act of the employer or his representative. This was held to be a patent inequality, "which might bear heavily to the prejudice of employees."

The chief emphasis, however, was placed upon the lack of due process of law in the matter of determination of claims. The act provides that where compensation is not settled by agreement, either party may apply for the formation of a committee of arbitration, one member of which is to be nominated by each of the two parties, the third to be a member of the industrial accident board. This committee is to "make such inquiries and investigations as it shall deem necessary. The hearings of the committee, unless otherwise agreed, shall be held in the city or town where the injury occurred if within this Territory;" and a copy of the award is to be immediately sent to the parties, and is enforceable unless a claim for review is filed by either party within 10 days after the sending of the award. The court held that the omission of any provision for the sending of notice to both parties of the holding of the hearings was fatal, and that it was not enough that there might be notice given, but that it must be absolutely safeguarded that notice shall be given. It was not regarded as sufficient that the parties were to be called upon to nominate members of the committee, nor that they were to be given the privilege of demanding a review. "Neither the committee of arbitration nor the board can have a constitutional jurisdiction to proceed to a hearing and award without notice to the parties involved, and this notice must, of necessity, be provided for in the statute itself."

It is of interest to observe that the Hawaiian statute follows with practical exactness the provisions of the laws of Iowa and Massachusetts in regard to the formation of boards of arbitration and the assumption that the holding of hearings involves notice to the parties, without formal provision requiring that such notice be given. The New York law requires the commission to "order a hearing," and it may require the claimant to appear before an arbitration committee, but does not in form direct notice to both parties to appear.

The law of Michigan on this point is practically identical with that of Hawaii, while that of Oklahoma varies but little, notice not being specifically provided for, but the presence of both parties being assumed. On the other hand, the laws of a number of States are specific in directing that notice shall be given to both parties of any hearing that is to be held. It is evident that in a number of important States no difficulty has been found in the procedure under a law of corresponding or identical provisions with the provision adopted by the Hawaiian legislature, but that in any case the point involved is not a substantive one, and is easily remedied by legislative action, the principle of compensation being in no way affected.

Another point raised by the court was that of the right of trial by jury, which was held to be guaranteed to the citizens of Hawaii by a specific Federal constitutional provision, which "can not be ignored or set aside by the Territorial legislature." It was held not to be sufficient that there might be an appeal to the circuit court, with a trial by jury, following the award, since the matters that might be carried to the court on such an appeal were limited, and the jury would not have authority to determine the amount of damages or compensation to be allowed the claimant, citing the Ives case, and distinguishing the situation existing in Hawaii from that in New York, whose law is said to be in this respect substantially similar to that of Hawaii, and which was upheld as constitutional by the Supreme Court. While the discussion on this point is much less extensive than that relating to the matter of notice, it is obvious that the defect, if held to be such by the higher court, will be much more difficult to remedy by new legislation, inasmuch as it involves one of the important factors in procedure under compensation laws.

It is interesting to observe the authorities on which this decision rests and to note that difficulties are discovered which the courts of the States have overlooked in determining their laws constitutional. The case will doubtless be passed upon as promptly as possible by the supreme court of the Territory, and students of the compensation situation will await with interest the opinion of this court in its choice of precedents and interpretation of the law to be followed.

NOTE.

A letter from the secretary of the Industrial Accident Board, city and county of Honolulu, under date of December 20, 1917, states that a decision of the Supreme Court of the Territory of Hawaii handed down on December 11 reversed the decision summarized above, and pronounced the Territorial workmen's compensation act of Hawaii constitutional and valid.

INDUSTRIAL ACCIDENTS AND DISEASES.

UNIFORM STANDARDS FOR THE MANUFACTURE AND TRANSPORTATION OF HIGH EXPLOSIVES.[1]

BY LEWIS T. BRYANT, COMMISSIONER OF LABOR, NEW JERSEY.

In discussing the subject assigned to me, I shall treat the matter of transportation of high explosives before that of their manufacture.

The necessity for uniform standards in the matter of transportation has been so apparent that the problem seems to have been solved in an excellent manner through the regulations issued by the Interstate Commerce Commission. These regulations have been formulated upon the recommendations of the Bureau for the Transportation of Explosives and Inflammable Material.

Before these recommendations were made by the bureau, consultations were held with the manufacturers and shippers of high explosives and the railroads which were to perform the transportation service. Types of containers have been specifically designated for both solids and liquids and the directions for shipment outlined in minute detail.

Naturally the jurisdiction of the Interstate Commerce Commission confines itself exclusively to shipments between States, and the matter of intrastate shipment is not included within their regulations. I understand, however, that in most States the transportation companies have insisted upon a compliance with rules substantially the same as those insisted upon by the Interstate Commerce Commission.

Previous to this action on the part of the Interstate Commerce Commission, which was encouraged by the Institute of Makers of Explosives, the different States enacted regulations which were framed without regard to the requirements in other States, and as a consequence were entirely lacking in uniformity. This state of affairs made it necessary for shippers to be conversant with a variety of laws, which were at times confusing and difficult to observe.

If it should be thought advisable to enact State regulations for the transportation upon railroads of high explosives and other

[1] This paper was prepared for the Government section of the sixth congress of the National Safety Council, held in New York in September, 1917, but was not read.

dangerous articles, the regulations provided by the Interstate Commerce Commission might well form the basis for such standards. As these rules are based on a long period of experience and have been tested for that mission, it is unlikely that State officials with a limited range of experience could add much to their value.

These regulations provide a list of shipping names by which explosives are known, which must be plainly marked on the package, and a number of articles by reason of their highly explosive nature are forbidden transportation. Certainly any State code should give rules of this character due consideration.

The question of transporting high explosives through the public highways of the State in either horse-drawn or motor vehicles is a matter which should receive careful consideration. The very greatest carelessness has been known to exist in this type of transportation and the lives of pedestrians, as well as those directly concerned in transporting the material, have been in danger.

The act relating to the manufacture, keeping, storage, transportation, and sale of explosives which was enacted by the New Jersey Legislature of 1917 has handled this question of transportation in the following manner:

> Every vehicle while carrying explosives upon the public highway shall display upon an erect pole at the front end of such vehicle and at such height that it shall be visible from all directions a red flag with the word "DANGER" printed, stamped, or sewed thereon, in white letters at least 6 inches in height, or in lieu of such flag the words "EXPLOSIVES, DANGEROUS," must be painted or attached to the ends and each side of such vehicle in white letters on black background at least 6 inches in height.
>
> It shall be unlawful for any person in charge of a vehicle containing explosives to smoke in, upon, or near such vehicle, to drive the vehicle while intoxicated, to drive the vehicle in a careless or reckless manner, or to load or unload such vehicle in a careless or reckless manner, or to make unnecessary stops.
>
> It shall be unlawful for any person to place or carry, or cause to be placed or carried, any metal tool or other similar piece of metal in the bed or body of a vehicle containing explosives, unless contained in a box or other container approved by the commissioner of labor or his authorized representatives.
>
> It shall be unlawful for any person to place or carry, or cause to be placed or carried, in the bed or body of any vehicle containing explosives, any exploders, detonators, blasting caps or other similar explosive material, or to carry in or upon such vehicle any matches or any other flame-producing device, except safety matches carried in a container approved by the commissioner of labor or his authorized representatives.

This provision of the law was decided upon after consultation with experts in the matter of such transportation, and there can seem to be no reason why, if these general provisions are necessary for safe practice in New Jersey, they should not be included in the laws of other States.

The matter of the manufacture of high explosives would seem to resolve itself into two general problems—first, the safety of the operatives employed within the plant, and secondly, the safety of those inhabiting the surroundings adjacent to the plant or points within fixed limits either from the public highways or steam railroads or trolley cars.

The protection of the operatives within the plant is twofold—first, from such injuries to health as may arise from contact with poisonous or unhealthful processes incident to the manufacture, and, secondly, from explosions. The matter of the interior regulations was taken up jointly by the representatives of the departments of labor of Pennsylvania and New Jersey. The leading authorities were consulted and a number of exhaustive conferences were held.

Joint regulations were formulated by these two States which were intended to fully protect the workers concerned in the industry. Due consideration was given to the best obtainable safe practices in vogue both in this country and abroad, and the regulations adopted included the best obtainable methods of safeguarding the operative from both the danger to health and the explosive hazard incident to the occupation.

Generally speaking, the matter of the health hazard is largely that of insuring the artificial removal of injurious fumes and dust and the maintenance of proper ventilation, the furnishing of adequate washing facilities, including showers, suitable toilet accommodations, separate and distinct eating places, and medical examination. The workers should receive most careful instruction as to the dangers incident to the employment, and great care should be taken against coming in contact with the absorbent poisons.

The joint regulations referred to include among their provisions the following:

Where the amount of gases or vapors produced in rooms or buildings is considered dangerous to health by the inspection department, an efficient exhaust system, constructed in accordance with plans which must be filed with the department of labor, must be installed and kept operating during all times when persons are employed therein.

Warning signs must be posted on the premises which strictly prohibit workmen from entering buildings where harmful fumes exist or tanks or confined spaces which are not entirely clear of these fumes. In case an entrance into buildings or tanks is necessary the worker must wear an approved helmet, and in addition he must wear a life line, which shall be in the hands of an assistant stationed outside of the tank. Employees who have been exposed to fumes and who feel sick shall report their condition to their foreman and shall be given proper treatment without delay. The responsibility for complying with these regulations shall rest upon the foreman or other official designated for that purpose by the management of the concern.

For every 50 persons or less employed in a plant where workers are exposed to harmful vapors there shall be present at all times at least two persons who are trained or competent to apply means of resuscitation by the prone pressure or Schaefer method or by mechanical devices that must be approved by the department of labor. A sufficient number of helmets of an approved type shall be kept at each plant, where they shall be available for use by every employee who has occasion to enter places where there may be asphyxiating or poisonous gases or fumes or vapors.

All employees who are required to wear helmets shall be thoroughly instructed in the use of such apparatus and shall be physically examined by a licensed physician at least once in 90 days or after absence from work due to either sickness or accident.

Bathing facilities shall be provided and clean clothing shall be kept on hand, so that all persons who are exposed to dangerous vapors and who are required by the regulations to bathe and change their clothing shall have opportunity to do so.

The regulations call for the installation of approved methods of dust and fume removal in all cases where they exist to an injurious extent.

As the very nature of the material handled makes it absolutely impossible to obviate all of the dangers incident to explosions, the most obvious and practical safeguard is to insist upon having the work performed by the minimum number of operatives necessary for a given process, so that in the event of an explosion, just as few workers as possible may be affected. These working units should be so separated by fireproof inclosures that in the event of a fire or explosion the danger will not be transmitted to another unit of the plant.

The storage of explosives is a subject of great importance in the regulations, which require that all buildings in which any quantity of explosives is manufactured, handled, used, or temporarily stored shall be classed as explosive buildings. Buildings used for storage for periods exceeding 48 hours shall be classed as magazines.

Explosive material not in process of manufacture but which is being used in loading detonators, timing, or priming caps, or any like manufacturing process, shall not be stored in workrooms wherein people are employed, except under the following conditions:

Where the quantity used for the day's run does not exceed 100 pounds, it is permissible to keep in closely covered receptacles that necessary for the day's run.

Where the quantity necessary for the day's run exceeds 100 pounds, only 100 pounds may be stored in the workroom at one time and then only at a place where it shall be suitably protected from careless or promiscuous handling. Additional supplies shall be brought from the magazine as needed.

Explosive materials being used in the above processes may be stored in any quantity in storage buildings erected for that purpose, provided that such buildings are not used for other purposes and are located at proper distances

from other buildings wherein persons are employed, or are protected by suitable natural or artificial barricades.

Fulminates or materials of like sensibility shall be brought into workrooms in quantities sufficient only for concurrent use.

Where materials giving off explosive vapors are stored in separated or underground storage systems outside of buildings, they may be distributed by approved types of pipe lines throughout buildings where persons are employed.

The openings which are necessary in fire-resisting walls shall be provided with an approved type of fire-resisting door, and these doors shall be kept closed at all times except when in use to permit passage from one room or portion of a plant to the other. On all such doors shall be posted an approved danger sign, warning against the carrying of matches or an open light and prohibiting the entrance of any but authorized employees or others designated by the manager or superintendent.

The number of employees in such rooms or portions of a plant shall be kept to the minimum compatible with the process of manufacture. This can be obtained by building additional fire-resisting portions or by the addition of small-unit buildings.

No open or naked lights, such as lanterns, stoves, torches, etc., shall be allowed in such rooms or portions of plants, except for necessary repairs under proper supervision. Watchmen or others using portable lights shall be supplied with vapor-proof lights.

Such rooms or portions of plants shall be lighted (if artificial light is needed) by means of an electric system installed in conduit or in lead-incased cables, with vapor-proof keyless lamps. All switches or fuses shall be located on the outsides of such rooms or buildings in a protected place. This installation must conform to the underwriters' standards. It would be preferable and desirable if all lights could be projected by reflectors into rooms from the outside through properly located windows. The employment of electric motors other than those of a sparkless induction type in the above rooms is forbidden.

All rooms or portions of explosives plants in which they are used, generated, or found and wherein persons are employed, shall be separated from other rooms or portions of plants by fire-resisting walls or partitions, pierced with such openings only as are necessary, except when such rooms or portions of plants consist of separate buildings. In such places where the material which is being used or which produces the explosive vapors does not exceed 10 gallons in quantity and is confined in approved safety cans, it will be necessary only to prohibit the use of naked flames, to post approved danger signs and to observe safe practices. Materials which give off explosive vapors shall not be stored in workrooms wherein people are employed, unless such materials are stored in closed containers properly vented. Where practical, safety cans should be used.

No employee shall have in his possession at any time in any explosives plant, any match or other flame-producing device, unless he is authorized in writing by the superintendent to do so, in which case approved safety matches only may be used.

A search for matches shall be made by some authorized person at least twice a week at irregular intervals. The finding of a match or other flame-producing device on the person of an employee not authorized to have matches in his possession shall be cause for instant dismissal.

All employees handling loose explosives or working in or around explosives manufacturing buildings where there is a possibility of explosion by the attrition of metals shall wear powder shoes or rubber-soled shoes (without iron or steel nails). No pockets shall be allowed in the clothing worn in any such

work except one skeleton pocket in either the coat or trousers. Neither iron nor steel buttons, nor other metal attachments, shall be allowed on such clothes, nor shall metal objects, such as knives, keys, etc., be allowed to be carried in the pockets.

All explosives buildings shall be provided at each entrance with suitable devices whereby the shoes of all those persons entering such buildings can be cleaned and all persons before entering such buildings shall wipe or clean their shoes.

Where explosives are carried from one building to another, as for instance from magazines to workrooms, employees carrying such explosives shall not be allowed to follow each other closely but must allow an interval of at least one minute in time or 100 feet in distance. This does not apply to such explosives as trinitrotoluol and smokeless powder.

The workrooms, when desirable, shall be heated by an approved system of steam, indirect hot air radiation, or hot water. The temperature of steam shall not exceed 120° C. The radiators shall be at least 1 inch distant from all wooden walls or other inflammable material and shall be attached in such a manner that they can be easily inspected and cleaned.

In addition to the foregoing regulations the following shall be observed with reference to the manufacture and handling of the respective substances enumerated below:

Nitroglycerin and dynamite.—The floor of the nitrator house shall either be covered with sheet lead or the nitrator shall stand in a suitable lead pan, drained to the drowning tank. All seams and joints shall be lead burned in a careful manner, so that there may be no crevices in which nitroglycerin will lodge. The floor shall be so constructed as to be readily washed and drained. New lead floor covering shall be extended by means of a round corner at least 3 inches up each side wall, thus making a sanitary corner.

At least two reserve thermometers shall be kept in each nitrator house for use in case of emergency.

No iron valves shall be allowed on any nitroglycerin pipe lines, except quick opening nitrator plug cocks, which shall be frequently lubricated. All other valves or stopcocks on nitroglycerin pipe lines or containers shall be of stoneware, earthenware, hard rubber, or wood and shall be kept clean and greased. No repairs shall be made during nitration except in emergencies. Nitrators shall be provided with coils for cooling by cold water, or brine or other suitable means and also with means for both mechanical and compressed air agitation. No more than two nitrators shall be installed and not more than three employees shall be regularly employed in any one building. During nitration the attention of one employee shall be given wholly to observing the thermometer and running in the glycerine. No charge of nitroglycerin shall be sent to the separator house in a hose line while nitrating operations are in process.

Each nitrator house shall be provided with a drowning tank which shall have a water capacity of at least five times the amount of the acid charges and be provided with an air agitator and water inlet. All valves shall be located conveniently for the operators in case of emergency.

The floor of the separator house shall be covered with sheet lead with all seams and joints lead burned in a careful manner, so that there may be no crevices in which nitroglycerin will lodge.

Not more than two charges shall be allowed in a separator house at one time. The maximum number of regular employees in each separate house shall be three. All stopcocks or valves on nitroglycerin pipe lines or containers

shall be of stoneware, earthenware, hard rubber, or wood. Catch boxes shall be provided on all outlets for wash water, and inside catch boxes, if used, shall be cleaned weekly, at times when there is no charge of nitroglycerin in the separator house. No charge shall be sent from the separator house at a time when a charge is being received. Each separating tank shall be cleaned and the floors washed daily at the conclusion of the day's work. It is permitted to carry on the three operations of nitration, separation, and neutralization in one building, provided that the regulations prescribed for each individual operation are complied with.

Not more than 12 employees shall be allowed inside of a cordite blending house. Not more than 10 employees shall be allowed inside of a gravity type of blending house. By gravity type is meant that type of blending house in which the entire charge of powder is deposited in a bin or funnel situated one or more floors above the packing floor. Not more than eight employees shall be allowed inside of a bin type of blending house, i. e., a house in which all operations are carried on on one floor.

The following materials are classed as explosives: Black powder (all varieties), dry guncotton, nitroglycerin, dynamite, chlorates, fulminates, fireworks, and any other of their compounds or mixtures or any other substances which are subject to explosion by the aid of shock, friction, spark, or heat. Smokeless powder, wet guncotton, and wet nitrostarch, while not properly classed with the above as explosives, are also included in these regulations.

While the summary of regulations for the manufacture of explosives covers a wide range of activities it is not entirely complete, and the department of labor of New Jersey, in conjunction with the department of labor of Pennsylvania, is now engaged in accumulating data with reference to providing rules for the safe loading of high-explosive shells and the filling of timing fuses and primers for high-explosive shells and Russian and American shrapnel. A catastrophe that occurred recently in a New Jersey factory where primers were being loaded caused the loss of life of 13 people, and emphasizes the urgent necessity for safety standards on this subject, while a disaster of far-reaching consequences involving a greater loss of life in a Pennsylvania plant forms additional evidences of the necessity for action.

Before the act relating to the manufacture, keeping, storage, transportation, and sale of explosives was introduced at the 1917 session of the New Jersey Legislature, Mr. Hershfield, the sponsor for the bill, directed communications to each State in the Union asking advice as to the best type of legislation for this subject. If the replies received by him could be read at this conference, no better argument for a uniform law could be produced. There seemed to be no comprehensive legislation on the subject, and the provisions of the act which was finally drafted were largely pioneer in their character.

It defines with great detail the distances at which buildings, railways, and highways may be located with reference to definite amounts of explosives. It sets forth accurate definitions of build-

ings, railways, and highways and includes a quantity and distance table.

It defines the maximum amount of explosives which may be stored and sets forth the allowances made for properly constructed barricades. It gives in detail the type of containers which must be used for keeping or storing explosives in any place within the State, and provides for properly labeling the containers. The character of magazines in which explosives may be kept or stored is indicated, and it is required that there be conspicuously posted thereon the words, "Magazine—explosives—dangerous."

It prohibits the storing of blasting caps or other detonating or fulminating caps or detonators in any magazine in which other explosives are kept or stored. Reports must be made to the commissioner of labor setting forth—first, location of magazine; second, contents of magazine; and, third, distance from the nearest buildings, railroads, and highways.

A certificate of compliance must be secured from the commissioner of labor, which may be canceled by him where future conditions do not constitute compliance with the law.

The law provides a license fee and requires an inspection at least once during each year of every licensed factory or magazine. It covers the transportation by vehicles on the public highways as already set forth, provides for penalties for noncompliance, and makes the following exemptions:

(A) For the regular military or naval forces of the United States or its allies, and the duly authorized militia of any State or Territory thereof, and the police or fire departments of this State, or of any municipality or county within this State, providing the same are acting within their official capacity and in the performance of their duties.

(B) To explosives being transported upon vessels or railroad cars in conformity with the regulations adopted by the Interstate Commerce Commission; the transportation or use of blasting explosives for agricultural purposes in quantities not exceeding 200 pounds at any one time, and of any explosives in quantities not exceeding 5 pounds at any one time.

It includes a provision relative to municipal ordinances and prohibits the use of liquor or matches within a plant. It provides for an indemnity bond to cover final judgments that may be rendered for damages caused to persons and property by reason of any explosion at the factory of the explosives there manufactured or handled, and permits the waiving of this bond where ability to discharge such judgment is set forth to the satisfaction of the department of banking and insurance.

The necessity of covering these various provisions in a uniform manner would seem apparent to any student of the situation, and has certainly been recognized by the Institute of the Makers of Explosives. This institute has prepared a suggested State law which includes regulations covering the matters which have been discussed in this paper. Their pamphlet on rules covering the handling, storing, delivering, and shipping of explosives would also seem to be an appeal for uniformity in this class of regulations, and the type of standard storage magazine recommended by them is a further argument for uniformity.

The trend of the working policy of modern industry in dealing with its living units is to substitute the imperative and unsatisfactory spirit that commands for the modern and more enlightened spirit of cooperation, and thus spur the worker on to his greatest effort by persuasion rather than to demand it through fear or force. Some of the larger and better managed industrial corporations who were dissatisfied with working results achieved under the old system, after investigating the possible cause of discontent and friction prevailing throughout their working jurisdiction, arrived at the conclusion that the constant migration of labor that severely handicaps the profitable operation of business, is due in a large measure to unsuitable working surroundings, affecting either the safety, health, or comfort of employees.

Experience has demonstrated that a plant labor policy is a failure when it is not broad enough to comprehend the physical needs of the human body and its dependence on warmth, cleanliness, and food, and furthermore does not inspire confidence in the worker that the employment is provided with the largest measure of safety to life and limb that the nature of it will permit.

The advantages that accrue to industry, when a careful and intelligent investigation of working processes has been made the basis for establishing shop rules are manifold and are now fairly understood by an ever-widening circle of intelligent employers, who condemn practices that cause exposure to physical risk.

The physical care of the worker in the light of scientific research is not a proper subject for speculation or experiment, and, indeed, it is now ranked as a matter of incalculable importance, and is placed in the same business columns with the question of wages, hours of labor, and production.

The nature of certain portions of the explosive industry requires a man of more robust health than other occupations, and alcoholism makes a worker far more susceptible to the dangers of the industry.

To my mind the very nature of the industry under discussion makes it necessary for the enactment of regulations which are pre-

pared by those having a more technical knowledge of the subject than could properly be expected from the average legislator.

There can be no doubt but that the conscientious manufacturer who is anxious to properly safeguard the life, limb, health, and comfort of his workers would welcome uniform legislation along these lines, and certainly the unscrupulous or indifferent employer should not be permitted to expose his workers to unhealthful or dangerous conditions.

On the whole, I believe the best way to reach the situation would be the adoption of a uniform standard of regulations by the several States or a Federal act covering the situation.

ACCIDENT HAZARD OF THE INEXPERIENCED MAN IN THE STEEL INDUSTRY.

The question as to whether the "green" man in industry is more subject to accident than the experienced man is of particular interest at the present time when great industrial activity has resulted in so many new men being taken on in certain industries, notably the iron and steel industry. The question is also one of very great practical importance, since, if it is true that the green man is peculiarly liable to accident, efforts toward accident prevention must take this factor into account.

The limited data so far available indicate that the inexperienced worker does have a very high accident rate, and that the rate tends to decrease with his degree of experience. But the available information is so limited as to warrant the separate publication of the following table as a contribution to the subject. This table, taken from a forthcoming report of this bureau on accidents in the iron and steel industry, shows the accident frequency rates per 1,000 300-day workers, classified according to their amount of experience. The data are for a group of 3,527 300-day workers in a large steel plant during a period of 5 months.

ACCIDENT FREQUENCY RATES ACCORDING TO LENGTH OF SERVICE.

[Data for a large steel plant January to May, 1916.]

Length of service.	Number of 300-day workers.	Number of accidents.	Accident frequency rates.
Six months and under	512	57	111.3
Over 6 months to 1 year	278	29	104.3
Over 1 year to 3 years	357	31	86.8
Over 3 to 5 years	637	27	42.4
Over 5 to 10 years	814	16	19.7
Over 10 to 15 years	470	4	8.5
Over 15 years	459	0	.....
Total	3,527	164	46.5

The striking feature of the above table is the steady and marked decline in the accident rate with increasing experience. It is altogether probable that even more striking results would appear if the first year could be more finely subdivided.

The table has one feature which should render its testimony of greater weight than that of most compilations on this subject. Ordinarily the only available information is the number of accidents to men of a given degree of experience. The fact that there were, in a given period, 10 accidents to men of less than 6 months' employment, while to those employed 6 months to 1 year there were 5, suggests that there was a greater hazard to those of shorter experience. It does not prove the point, however, as in order to do that it is necessary to know how much labor was performed by men of each degree of experience; in other words, to know the number of 300-day workers. In the preparation of the above table this information was available with sufficient accuracy to give entirely reliable results for purposes of comparison.

Finally, it is to be noted that other factors besides inexperience may account in part for the showing made in the above rates. For example, workers of more than 15 years' service are to a considerable extent, for one reason and another, those who have passed out of the extreme danger zones. Their immunity is probably much more due to that fact than to the degree of their experience.

But, after all necessary qualifications, it would appear that beyond question this table does establish a strong probability that the inexperienced man has high hazard on account of his inexperience. In such case it becomes little less than criminal that he should be thrust, as has been too often the custom, into those occupations in their nature extra dangerous.

SECOND INDUSTRIAL SAFETY CONGRESS OF NEW YORK STATE.

The second annual New York State Industrial Congress was held at Syracuse on December 3, 4, 5, and 6, 1917, approximately 400 delegates being in attendance. The papers and discussions at this congress revealed the earnest desire of those taking part to develop in every practical way the means at hand to promote the safety and conserve the lives of workers in industry. While not the announced purpose of the congress, it may be said that it did, in fact, emphasize several important principles suggested by the addresses given and intended to safeguard the interests of labor as well as promote industry and operate for the universal benefit of employers. Thus the congress emphasized the necessity for unceasing vigilance against

relaxation of the standards of law enforcement during the period of war pressure; for the standardization and better classification of accident statistics; for the standardization of the workmen's compensation laws and of the general labor laws of all the States; for taking steps to prepare industry for the assimilation of returned soldiers; for a more complete enforcement of the factory laws in all the States, and in New York State in particular; and it approved labor's program for a universal eight-hour day.

It is not possible to give synopses of all the addresses and discussions presented at the congress. This article is therefore confined to a statement showing some of the points brought out which may be helpful to employers and workers in preventing the huge toll of lives annually sacrificed on the altar of carelessness and negligence.

At the opening session on Monday, December 3, five addresses were given. Carlton A. Chase, president of the Associated Manufacturers and Merchants of New York State, declared that wounded and disabled men will need special places in industry after the war, and urged the congress to indorse some plan by which industry may be able to assimilate them.

James P. Holland, president of the New York State Federation of Labor, brought greetings from the 800,000 wage earners of the State who he said are heartily in accord with the purposes of the industrial safety congress and are firm in their desire to help win the war.

Dr. Royal Meeker, Commissioner of the United States Bureau of Labor Statistics, pointed out that the foundation of all safety work is the proper recording of industrial accidents, classifying them by causes and showing the time losses resulting from the injuries suffered. We should not confine our efforts to the standardization of accident statistics. Our compensation laws should be standardized, as well as our labor laws in general. It ought not to be possible for one State to defeat labor legislation on the plea that it would drive industry to a neighboring State. Labor laws should be enacted for the same purposes in all the States. Each State must adjust its laws to its peculiar necessities, but there should be no great variations. There are laws on the books now of which people have never heard simply because they are not enforced. There is no attempt to enforce them. It seems to me one of the most important duties of the labor unions of this country is to see to it that the labor laws on the statute books are enforced. Much new labor legislation is needed, but a little enforcement will accomplish more than much legislation. Better enforcement of existing labor laws will do more than any other one thing to allay industrial unrest, which is the most serious menace at present to the proper prosecution of the war.

"Industrial education as a safety measure" was the subject of an address by Marian K. Clark, chief investigator, Bureau of Industries and Immigration, who emphasized the importance of teaching English to foreign laborers as a means of decreasing the enormous loss of life through accidents.

Marcus A. Dow, general safety agent, New York Central lines, who spoke on the "Rule of reason," uttered a warning against permitting the deterioration of man power as the result of the possible breakdown of safety standards in industry owing to the pressure of war. "I have no sympathy with the thought that because lives are necessarily sacrificed for a righteous cause on the battlefront other lives must be unnecessarily sacrificed at home through neglect. Surely, the killing of 22,000 and the seriously injuring of half a million industrial workers in the country each year is a serious drain on the man power of the Nation at a time when every available man is needed for the work that is to be done."

Lucian W. Chaney, of the United States Bureau of Labor Statistics, called attention to the responsibility of employers in promoting the safety movement, the emphasis heretofore being placed on the employees' share of the responsibility. This attitude has caused the movement to suffer. Engineering revision, which includes the widest possible application of engineering skill, was declared to be essential in order to discover the lurking dangers which lead to death and devise remedies to prevent them. This engineering revision refers to the location and relation of buildings, the organization of transportation facilities, the design of every mechanical contrivance, the provision of safe means of access to every point to which a workman would ever be required to go, the adequate covering of every moving part, even where no one is expected to go since the exigencies of operation can never be foreseen, provision against the falling of objects from elevations, and a thousand other items to which safety men may think they have given full attention but which the record of accidents prove have not yet been adequately considered.

"How the employer feels about it" was presented by J. E. Eaton, general manager of the General Electric Co., Schenectady, N. Y., who read a paper prepared by J. A. Smith, general superintendent of the same company. He spoke of the favorable attitude of employers toward accident prevention as evidenced by the safeguards thrown about machinery and apparatus, and the elimination of dangerous conditions and practices. He said it was a patriotic duty now to prevent shop accidents.

At the Tuesday afternoon session David S. Beyer, of the Liberty Mutual Insurance Association, Boston, Mass., led the discussion by

stating that both mechanical devices and education are equally important for safety; Frank Ward, safety engineer, Otis Elevator Co., gave the experience of his company with shop committees in conducting a safety campaign, and indorsed the plan; Earl B. Morgan, of the Norton Co., Worcester, Mass., spoke on "Accident prevention in its relation to labor turnover," stating that intelligent, well-planned, and efficient safety organizations will do much to reduce the constant change in personnel of employees. At the evening session A. J. Van Brunt, director of safety education, Public Service Corporation of New Jersey, gave it as his opinion that accidents never "just happen," but are caused by carelessness on somebody's part, each having behind it a train of logical, connected circumstances to account for its occurrence. Safety first means the elimination of nearly 95 per cent of these causal circumstances. This statement was made following the quoting of statistics by A. H. Young, of the American Museum of Safety, showing that 1,500,000 wage earners were seriously injured and 22,000 were killed in industrial accidents in America last year. This carelessness on the part of workmen, however, was attributed by John M. O'Hanlon, editor of Legislative News, to the conditions surrounding them in their work, existing because of the negligence and irresponsibility of employers who "scorn all modern ideas and devices of safety and sanitation, accepting them only under compulsion and regarding them ultimately as hindrances to speedy production."

A tribute to organized labor for what it has accomplished in its campaign for improving conditions was paid by Arthur E. Holder, legislative agent, American Federation of Labor, who concluded his address with the following recipes for the reduction of the accident ratio:

Increase the age for child workers.

Shorten the working hours.

Hold regular conferences in shop offices, composed of supervisors and workmen, for the purpose of discussing shop affairs from a standpoint of safety.

Post Davy Crockett's slogan on the bulletin board, "Be sure you are right, then go ahead."

Ask public-school teachers to give lessons on "Safety."

Request pastors to call attention to the subject from their pulpits.

Encourage moving-picture producers to feature as many safety ideas as possible.

Another good old slogan: "Better be safe than sorry."

More factory inspectors, and a better selection. An efficient inspector should be a properly trained man.

Urge employers personally to examine proposed speeding-up schemes before installing them.

Urge Congress to collect national accident data to cover every industry in every State.

An important feature of the congress was the session devoted to the general subject of "Working women in war time," special consideration being given to the matter of substitution of women for men in war industries from the point of view of safety and health. It was brought out at this session that there is no immediate necessity for the employment of women in places now held by men, one speaker suggesting as proof of this the great number of men now out of work.

The general subject of Thursday's sessions was "The employer and the labor department inspectors," embracing a discussion of the best method of establishing proper cooperation between employer, employee, and inspector. Charles Barnes, director of the State bureau of employment, warned against what he characterized as the tendency of some manufacturers to replace their male employees with women to cover "shortage of labor," stating that "there is in this country enough human beings potentially capable of doing all the work required, and that, too, without materially (as yet) increasing our number of women workers. But large bodies of workmen will have to be trained and retrained to meet new technical needs, and employers must face the problem of doing this training." The work of the State bureau of employment was analyzed, showing what had been accomplished during the preceding 12 months in registering over 90,000 people, receiving requests for employment from nearly 114,000 workers, and in offering jobs to a little over 110,000, of whom approximately 73,000 were actually placed. Upon investigating alleged scarcity of labor, Mr. Barnes continued, one or more of three factors were found to exist. Either (1) the call was for trained workers in technical lines, or (2) the demand was for husky laborers to do work calling for strong physique and endurance, or (3) the employer was offering too low wages, often coupled with long hours and bad working conditions.

Following Mr. Barnes' paper the various phases of factory inspection work were presented by John J. McSherry, Samuel C. Wilson, Patrick Shea, and William Gorman, factory inspectors.

HEALTH HAZARDS IN THE CUTLERY INDUSTRY AND MORTALITY FROM TUBERCULOSIS AMONG WORKERS.

Dangers to the health of workers in the cutlery industry are due to mineral and animal dusts, fumes, and gases, and to faulty illumination, according to the report of a special investigation of this industry at Northampton, Mass.[1] This investigation was conducted

[1] Massachusetts. Fourth annual report of the State Board of Labor and Industries, January, 1917. Boston, 1917. pp. 121 to 145.

under the direction of the State department of labor and industries and embraces four large factories employing about 600 men. Studies were made of each step in the process of manufacture with special reference to the health hazards involved, of the methods employed in diminishing the hazards associated with the process of manufacture, and of the present mortality rate among cutlery workers at Northampton and vicinity. It was found that in general the dust hazard is greatest in three departments, (1) handle, sawing and milling, (2) grinding, and (3) polishing and glazing (including buffing); that fumes and gases present a serious hazard in the forge department, where carbon monoxide is present, and in the hafting department, where lead and antimony, copper and tin are used; and that the practice of placing the machinery parallel to the windows, with the result that the hoods used to remove the dusts frequently shut off much of the light, gives rise to a faulty illumination which is quite a serious hazard and seems to have received little or no attention in the industry.

The report gives an account of existing conditions as the investigators found them in these four establishments, noting the apparent ineffectiveness in the design of the hoods, and their abuse by the workers who, in order to get better light, often push them back at some distance from the wheel, thus increasing the dust hazard and causing a black deposit to form on the walls and windows and reducing materially the illumination. The conclusions drawn from a mechanical survey of the cutlery industry with reference to the dust hazard are stated to be as follows:

1. A dust hazard exists in those rooms or departments where dry grinding and polishing are done. Mechanical exhaust has been provided in all of the factories investigated, decreasing the dust hazard to a marked degree, but will permit of great improvement.

2. All dry grinding and polishing wheels should be carefully hooded and connected with an adequate blower system. The hoods should be so designed and placed as to catch the dust as it is thrown from the wheels, and immediately guide it into the branch pipe opening.

3. Hand holes should be made into the main suction pipes at frequent intervals along their length to permit of frequent cleaning. Systematic cleaning and overhauling of the exhaust systems should be practiced.

4. The operatives should be educated to properly use at all times the dust-elimination devices installed for their protection, and to realize the hazard to their health resulting in their failure to follow these precautions.

5. The education of the employers as to the hazards to which grinders and polishers are subjected, and the necessity of improving the present exhaust installations, are essential.

At Northampton, according to the report, there were 13 deaths from pulmonary tuberculosis among cutlery workers during the years 1911 to 1915, inclusive, and during the same period among

those whose occupation was not associated with the cutlery industry, there were 78 deaths of males and 55 of females. At Montague, another cutlery center, during the period 1912 to 1915, inclusive, there were 5 deaths from tuberculosis among 300 cutlery workers, and 17 deaths from tuberculosis among noncutlery workers. These data are given in the following table:

MORTALITY FROM TUBERCULOSIS AMONG CUTLERY AND NONCUTLERY WORKERS AT NORTHAMPTON AND MONTAGUE, MASS., SHOWING AVERAGE AGE OF EACH GROUP AT TIME OF DEATH.

Year.	Northampton.						Montague.				
	Cutlery workers.		Noncutlery workers.				Cutlery workers.		Noncutlery workers.		
	Number.[1]	Average age at death.	Number.		Average age at death.		Number.[1]	Average age at death.	Number.[1]	Average age at death.	
			Males.	Females.	Males.	Females.				Males.	Females.
1911	4	40.3	14	8	40.2	36.0	.....	.....	.....	.....	.....
1912	1	59.0	23	14	40.9	37.7	1	40.0	[2] 2	.....	([3])
1913	2	53.0	15	8	40.5	37.4	1	44.0	3	23.5	18.0
1914	1	40.3	15	10	33.4	37.2	1	31.0	10	38.7	36.3
1915	5	48.2	11	15	32.7	38.7	2	29.5	2	38.0	35.0

[1] The report does not classify these by sex. [2] Females. [3] Not given in the report.

The data set out in this table would seem to indicate that (1) death from tuberculosis is not so prevalent among cutlery workers as among noncutlery workers (adult males); and that (2) the age at time of death among cutlery workers who die from tuberculosis is higher than the age at time of death from tuberculosis among noncutlery workers, both male and female.

From this study of the cutlery industry the following conclusions are drawn:

That the dust hazard can be reduced to a minimum by hoods properly placed, in accordance with the type of work carried on, on the particular machine creating the dust.

That the placing of the machines at right angles to the line of windows would guarantee adequate illumination and remove the necessity for pushing aside the hoods installed on the different machines.

That the powdering of the wheel with pumice and oil should be classified as dry grinding and polishing and not wet grinding and polishing; also that adequate exhaust should be installed on these machines.

That all gases, fumes, and smoke incidental to any process of manufacture can be adequately removed by efficient exhaust system.

That the high mortality associated with the cutlery industry is unnecessary, and can be reduced almost to the minimum by suitable attention to dust removal.

That the process of polishing, grinding, and buffing of small articles is a greater element of dust hazard to the worker than the same work on larger articles, because of the necessity of close proximity of the worker to the grinding, polishing, or buffing surface.

That the study of the cutlery industry at Northampton shows a marked improvement on the conditions set forth in the report of 1907, dealing with the cutlery industry at this same center.[1]

PROTECTION OF HEALTH OF MUNITION WORKERS IN ITALY.[2]

TRANSLATED AND SUMMARIZED BY ALICE HAMILTON, M. D.

Three pamphlets dealing with the prevention of industrial disease among munition workers in Italy have just reached this country. They are issued by a central committee for industrial mobilization under the ministry of arms and munitions, and they bear the signature of Dallolio, minister of arms and munitions.

It appears from these pamphlets that munition work in Italy is carried on partly in Government-operated and partly in private factories, and that for the supervision of the latter the central committee for industrial mobilization has appointed local branches which are to exercise a certain control over conditions of work in them. The instructions contained in the pamphlets are directed to military officers in charge of Government works and local committees for industrial mobilization.

The first pamphlet bears the date of June 16, 1917. The occasion for its issue is said to be the urgent necessity both for increasing the number of women employed in the munition industries and for making their work steadier and more valuable. It is no longer sufficient to persuade larger and larger numbers of women to enter these factories. The experience of Italy, like that of her allies, is that far too large a proportion of these women leave the factory after a few months' employment, especially if they are married women and mothers of families. It is indispensable that the causes for this excessive labor turnover be analyzed, since its effect is to hamper very greatly the output of war necessities.

Under the insistent call of their country, Italian women of all social classes have entered munition works. Most of them had never before been subject to the discipline of factory work, hence the necessity of carefully scrutinizing this new army of women workers in order to make the best use of them, and of not permitting them to be

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[1] Annual report of the Massachusetts Board of Health, 1917.

[2] Italy. Ministero per le Armi e Munizioni. Comitate Centrale per la Mobilitazione Industriale. Vigilanza igienico-sanitaria, June 16, 1917, 11 pp.; Istruzioni per la vigilanza igienico-sanitaria, June 29, 1917, 56 pp.; Pronto Soccorso in easi d'infortunia, Sept. 25, 1917, 3 pp. Rome, 1917.

exploited for the profit of their employers, nor subjected to exhausting labor, but conserving as far as possible their physical health and their moral health. The task of thus humanizing industry by preventing overexploitation has seemed so important to the British Minister of Munitions as to lead him to appoint a special department for the welfare of munition workers, a move which has been followed by indubitable success.

In order to bring about the same results in Italy a new department has been created by the ministry of arms and munitions, namely, a bureau of hygienic and sanitary control (*Ufficio di Vigilanza igienico-sanitaria*), which is to act in cooperation with the local committees of industrial mobilization in applying standards of hygiene and of medical care, to assure for the working classes favorable conditions of work and of treatment, bearing always in mind, however, the supreme necessities of the munition industry under war conditions. The bureau of hygienic sanitary control hopes to carry out the task of preserving the physical integrity of the working classes largely through the assistance of doctors who are to be attached to the munition plants and are to assist the local committees in formulating and applying hygienic rules for the individual establishments under the committee's control. These doctors are to work in connection with the committees, but under the supervision of the bureau. They must be men of high professional standing who have had experience in industrial hygiene. Each physician is to send regular monthly reports to his committee, concerning the cases of industrial disease which have come to his notice, so that the committee may know what preventive measures should be insisted upon. Apparently he does not inspect the factory, except when an unusually high sickness rate is reported to the committee. The reports are forwarded by the committees to the bureau of hygiene and sanitation, with which apparently rests the authority to pass upon all instructions to physicians and to factory owners.

The pamphlet points out the special difficulties attendant upon the employment of large numbers of women. Rooms should be provided where mothers may nurse their babies, crêches where the babies may be cared for during working hours. It is the doctor's duty to see that a pregnant woman stops work for four weeks before the birth of her baby. He must also be alert to combat tuberculosis, alcoholism, and venereal disease "which will find so fruitful a soil in this new industrial army of women and children."

The bureau urges employers to remember that to-day the problem of labor is not only a problem of work, but also of the physical, moral, and intellectual future of the race.

On June 29, 1917, the bureau of hygiene and sanitation issued a booklet of convenient size, containing the fully formulated instructions to all the local committees on the subject of health and sanitation in munition works. Here the duties of the industrial physicians are set forth in great d tail, and a list of industrial poisons is appended, with all necessary information as to the nature and prevention of industrial poisoning.

The statement is made that a new step has been taken in Italian industry; for the first time the hygienic care of the employee in his place of work will be undertaken through the entry of the physician into the factory, and a new relation inaugurated between physician, employer, and worker. The industrial doctor is warned that this is a task requiring the greatest possible skill and tact, and that it is his duty to use persuasion and gradual education in order to convince the manufacturer of the industrial and technical utility of adopting protective measures for his workmen. He must cooperate with the departments of labor and of health; he must be scrupulously careful not to betray any trade secrets. In his effort to protect the workers he is warned that he must always bear in mind the national emergency and counsel nothing that might impair the practical usefulness of the factory. All measures for safeguarding workers in specially dangerous occupations must first be submitted to the ministry of arms and munitions, for justice may demand that such measures, if adopted, be imposed on all similar factories in Italy.

Medical examination before employment is required for children of both sexes and for girls under age. The physician issues a permit for work which in his opinion may be undertaken without injury to the physical development of the child, stating also for what sort of work, if any, the child's strength is not adapted. These children and girls must be examined regularly while they are working, and whenever they change their employment. If the physician declares them unfit for work, they must be refused. Similar physical examinations are necessary [1] for others, especially women and adolescent boys, in order that it may be known whether they are fitted for employment in munition works. In the industries that are known as unhealthful, periodical examination of all the employees is necessary, so that early signs of poisoning may be detected. The physician is to be paid by the employer, but his selection and appointment are to be passed upon by the local committee.

The powers and duties of these industrial doctors are very carefully defined. The doctor must maintain secrecy as to the industrial

[1] The word used for the examination of children is "Obbligatorio;" for that of adults, "Necessario."

sickness he discovers; even in making out his report to the local committee he must only indicate symptoms without stating his diagnosis, although the case may be entirely evident. He may not himself suspend the sick person from work, but he must at once report the case to the bureau of hygiene, which will see to it that the local committee takes appropriate action. If he discovers persons in the early stages of poisoning or detects oversusceptibility to poison, he must confer with the employer as to suspension from work or shifting to other work. No worker may be reemployed except after medical examination. The industrial doctor is warned that while it is his duty to instruct the worker in methods of protection against disease, he is forbidden to advise him against entering these dangerous trades. Physicians attached to factories are required to report all cases of industrial disease to the local committee; physicians in private practice are courteously requested to do the same.

A list of industrial diseases which must be reported is given, but the physician is to indicate only acute cases of poisoning. He may specify the symptoms of chronic poisoning as given in the appended list, but he must not make a diagnosis of any specific form of industrial chronic poisoning. The substances which may give rise to industrial poisoning in the making of munitions are as follows: Benzol and toluol; anthracene; naphthalene; phenol; nitro and nitroso derivatives of benzene and phenol; amido derivatives of benzene; halogen derivatives of hydrocarbons of the fatty series (tetrachlorethane and trichlorethylene); nitrous gases; lead and its compounds; chromates; phosphorous and phosphoreted hydrogen; arsenic and arseniureted hydrogen; mercury and carbon disulphide. A concise yet adequate description is given of the industries in which these substances are used, the special processes which involve the greatest danger, the importance of individual predisposition to the poison, the mode of entrance and of elimination, the pathology, so far as it is known, the symptoms of acute and chronic poisoning, and the method of prevention and care.

General rules of hygiene applying to all these dangerous trades are given as follows:

Occupations involving special danger must be carried on apart from other work.

Floors, walls, workbenches and other surfaces should be smooth, even, impermeable, easily washed. Cleaning should be thorough and frequent, always with water if possible, and if infection is to be feared, with disinfectants.

Ventilation should be adequate, including not only a general air supply, but, where necessary, local air removal and supply.

There should be adequate natural and artificial lighting.

All refuse and débris should be frequently removed.

If poisonous material can not be kept in a moist condition, efforts should be made either to prevent dust or to draw it away at the place where it is produced.

Apparatus designed to control gases and vapors should be mechanical and automatic, with well-fitting coverings and impermeable pipes and ducts.

The number of persons engaged in manual work should be reduced as much as possible. Where handwork must be done, it should be carried on under a hood provided with a good draft, and with tools so made as to permit the worker to stand at a distance from the dangerous material, or else the harmful effects of the dangerous substance should be lessened by condensation of vapors or neutralization by means of well-tested reagents.

For transport for discharging fluids or powders, etc., closed channels or mechanical methods should be used, especially in cases of volatile or corrosive substances.

The crude material, the finished product, and the refuse, if it contains soluble toxic substances, should not be left out of doors, but in well-closed places under lock and key. These substances should be kept in covered receptacles, labeled, and with the word "poison" inscribed. Wherever possible innocuous or less toxic compounds should be substituted.

The following should be provided and their use required: Working clothes of good material, closed at the collar and wrists, to be washed at least once a week; head covering; gloves of rubber or leather in good repair, fitting under the cuff of the suit; shoes and sabots (wooden shoes); protective goggles; and, if necessary, respirators. All these to be kept in good condition, washed and repaired.

Dressing rooms should be provided separate from the workrooms with individual lockers, if possible, containing two compartments, for street clothes and working clothes.

Workers should be forbidden to introduce, keep, and consume food or drink in workrooms. They should not be allowed to smoke or chew tobacco while at work.

A refectory should be provided, with some means of warming food brought from home. No one should enter the refectory without having removed his overalls and washed himself.

Careful washing of the person after work should be insisted upon, both before lunch and on quitting work. Wash rooms in adequate number should be provided, with hot and cold water, soap, nailbrushes, and individual glasses for drinking or bubbling fountains. In the more dangerous industries tub or shower baths should be provided.

The workman should be instructed concerning the dangers to which he will be exposed, and this instruction should be repeated often. Printed instructions, briefly and clearly expressed, should be placed conspicuously about the factory.

Workmen should not have beards nor long hair and the mustache should be cut short. The greatest temperance in the use of alcoholic drinks should be advised, and workmen should be counseled to drink a great deal of milk and not to start work on an empty stomach.

A first-aid equipment should be provided and kept ready, including a cylinder of oxygen and hypodermic needles.

Medical examination should be made at the beginning of employment and periodically thereafter according to the danger inherent in the work. The weak and anemic and those with pulmonary lesions should be excluded. In case of mild poisoning there should be suspension from work, but the oversusceptible and those who have had more than one attack of poisoning should be discharged. No suspended person should be reemployed until he is entirely cured. For the most dangerous tasks the hours should be short and the workmen given change of employment at intervals.

The third pamphlet issued by the bureau of hygiene and sanitation is in the form of an open letter to all military men in charge of governmental munition works and local committees of industrial mobilization. It is dated September 25, 1917, and is apparently called forth by some serious cases of industrial poisoning. Inspections made in both governmental and private munition works show that insufficient attention has been paid to the provision of proper equipment for first aid in the specially dangerous industries, such, for instance, as the manufacture of explosives. "Too often it has become evident, to our grieved surprise, that an accident has resulted seriously or even fatally because timely help was lacking, the necessary medical supplies had not been provided, or the proper instructions for their use had not been given to the people in charge. The continually increasing pressure of work in munition factories forced by the supreme urgency of the present state of war requires most rigorous observance of those simple rules of hygiene and medical treatment in case of accident, which is the duty of all who employ labor and the right of all who accept employment; for even if these rules are not enforced by existing labor laws they are sanctioned by one of the most exalted religious sentiments—that of human brotherhood."

As far back as April 30, 1917, the necessity for providing quick and adequate medical care in establishments manufacturing explosives was urged by the minister of munitions, and arrangements were made by the local committees of industrial mobilization to have

physicians, in collaboration with the factory inspectors, render at least the indispensable minimum of care to the sufferers from industrial poisons and accidents. "It seems now, however, that the provisions for such care must be taken up again and pushed by all the authorities directly and indirectly concerned with munition work, in order that in the shortest possible time every military and every private factory doing war work shall be equipped with a proper first-aid department, which shall include what is absolutely necessary for that factory, according to the nature of the work done and the number of persons employed."

The name of the physician attached to the factory and his telephone number should be[1] posted in view in the first-aid room and in the timekeeper's room. If there is no doctor attached to the factory, some proper person should be trained in giving first-aid for injuries and in administering artificial respiration. This person is to have charge of the first-aid supplies. The first-aid room should be well lighted and ventilated and warmed in winter. It should always be clean. The following are the supplies absolutely indispensable for its equipment: Solution of bichloride of mercury 1-1000, or of lysoform; a locked box with absorbent cotton, gauze, bandages of different widths, all in closed packages; tincture of iodine, freshly prepared, and applicators kept in a corked bottle; stimulants, such as camphorated oil, 10 per cent, and a hypodermic preparation of caffeine, marsala, cognac, and infusion of coffee; hemostatics; bismuth, or carron oil for burns; a hypodermic syringe, always ready for use; forceps; a stretcher, which can also serve as a cot; a wash room, with water, soap, towels, and vessels for waste water; in addition, any equipment which the doctor may think necessary for that particular factory.

In places where there are gases and vapors known to be capable of producing poisoning, a rest room also should be provided, with one or more beds, and alkaline or ammoniacal solutions for spraying, oxygen under pressure, and a bathtub with hot water.

Industry has its casualties as well as war, and in all workshops where human life is imperiled let there be not only all the mechanical protective measures which the special nature of the work requires, but let there also be provided and kept in efficient condition everything which science has devised to render less painful and less dangerous to the worker the consequences of accidents occurring in the course of his work.

[1] The expression used throughout this paragraph is "it is necessary," not "obligatory," which makes these appear to be counsels, not commands.

SOCIAL INSURANCE.

SALARIED EMPLOYEES' INSURANCE IN GERMANY DURING 1916.[1]

TRANSLATED AND SUMMARIZED BY ALFRED MAYLANDER.

The directorate of the Imperial Insurance Institute for Salaried Employees has recently published its report for the year 1916. The principal object of this youngest branch of the German social insurance system is the payment of old-age and survivors' pensions. The law, however, provides a waiting time of 10 and 5 years for the payment of such pensions and this waiting time has not yet elapsed. So far only those insured members who had shortened their waiting time by the payment of extra premiums could present a claim for pension. Very few members have availed themselves of this privilege of shortening their waiting time, and consequently the number of old-age pensions paid by the insurance institute in 1916 was only 9 and that of survivors' pensions 15. The chief activities of the insurance institute, therefore, consisted in the collection of premiums and the granting of such voluntary benefits as are permitted by the law.

During the year 1916 the total amount of contributions paid to the institute by employers and insured members was, in round figures, 113,000,000 marks ($26,894,000). That the collection of contributions is connected with considerable difficulties is made evident by the fact that during the year under review the obligation to insure was contested in 13,953 cases; 7,558 of these disputes were still pending at the end of 1916. The paid-in contributions were largely invested in war loans, the institute having subscribed 60,000,000 marks ($14,280,000) of the fourth and fifth war loans. This subscription brings the total amount so far invested by the institute in war loans to 260,000,000 marks ($61,880,000).

Of the voluntary benefits granted by the insurance institute for salaried employees the granting of medical treatment comes first in importance. The institute during 1916 received 24,184 applications for curative treatment, i. e., 9,105 more than in the preceding year. The total cost of medical treatment granted during the year was

[1] From Hamburger Nachrichten. Die Angestelltenversicherung im Jahre 1916. Hamburg, Aug. 10, 1917.

7,400,000 marks ($1,761,200). Curative treatment in tuberculosis hospitals was granted to 4,853 members, in sanatoriums to 4,898, and in baths and watering places to 5,162, while 2,586 members were given treatment in general hospitals and 2,728 in dispensaries. In 310 cases the institute granted a subsidy for curative treatment.

The directorate of the institute also has taken special measures to facilitate the return to civil life of members who have been invalided during the war while serving in the armed forces. It has set aside a sum for the vocational readaptation of members invalided in the war. During 1916 the directorate received 95 applications from maimed members who wished to undergo a course of vocational training. Sixty of these applications were approved, 11 were rejected, and the remainder were still pending at the close of the year. As thorough experiments have shown that suitable dogs can be trained to lead blind men safely on the streets and to call their attention to dangers from public traffic, the directorate resolved to grant to members who have become blind in the war the means for the acquisition of such dogs.

The insurance institute has also been active in combating sexual diseases. For this purpose it has borne part of the costs of the dispensaries for sexual diseases maintained by the State invalidity insurance institutes.

In connection with the present article it should be remarked that of late considerable agitation has developed for and against the abolition of the salaried employees' insurance system and the combination of it with the workmen's invalidity and survivors' insurance system.[1]

This agitation had its beginning in an article published in 1916 in the "Zeitschrift für die gesammte Versicherungs-wissenschaft" in which Prof. Manes criticized the high cost of administration and the defective organization of the salaried employees' insurance system. He points out that the annual cost of administration amounts now to 3,000,000 marks ($714,000), that the staff of the salaried employees' insurance institute consists of more than 2,300 employees, and that the expenditure of 10,000,000 marks ($2,380,000) for a new building to house the institute is now being contemplated. Prof. Manes also states that the law of December 20, 1911, creating the salaried employees' insurance, was enacted for political reasons; it was intended to separate the salaried employees from other wage workers as a special social class. He says that the war has done away with such class distinctions and their upholding would endanger the social peace. He proposes abolition of the salaried employees'

[1] From Vorwärts. Der Streit um die Angestelltenversicherung. Berlin, Aug. 22, 1917.

insurance as a special insurance system, and extension of the workmen's invalidity and survivors' insurance with obligatory insurance of all gainfully employed persons earning less than 3,000 marks ($714) per year, and voluntary insurance of those earning 3,000 to 5,000 marks ($714 to $1,190). At the same time he proposes that the benefits of the invalidity insurance be increased.

Two other articles by Dr. Brumm, a member of the directorate of the State Invalidity Insurance Institute, Berlin, and by Privy Councillor Dr. Zacher, published in the same magazine, fully support the contentions of Prof. Manes. Dr. Zacher points out that according to estimates presented to the Reichstag before the enactment of the salaried employees' insurance law the cost of administration of this insurance should not exceed 2 per cent of the receipts from contributions, that to-day the cost of administration has reached double this percentage and will amount to 10 per cent as soon as the payment of pensions begins. He also condemns from a social point of view the separation of salaried employees and workmen, because the latter live under the same economic conditions as the former and because millions of small undertakers and agriculturists are insured in the workmen's insurance system.

In a recently published booklet[1] Hans Blankenstein, a Berlin author, makes the statement that the agitation for the abolishment of the salaried employees' insurance is inspired by the Imperial Insurance Office (*Reichsversicherungsamt*) which intends to bolster up the unfavorable financial condition of the workmen's invalidity insurance institutes at the expense of the salaried employees' insurance institute. In support of this contention he states that the latter is in an excellent financial condition by reason of the good investment of its capital at an average rate of interest of $4\frac{3}{4}$ per cent, as compared with that of the capital of the invalidity insurance institutes at an average interest rate of $3\frac{3}{4}$ per cent; that the capital of the invalidity insurance institutes has, moreover, decreased by 65,000,000 marks ($15,470,000) and that it is expected that the war will further deteriorate their financial condition on account of increased risks.

For the better understanding of this controversy it should be stated here that the proposed incorporation of the salaried employees' insurance into the workmen's invalidity insurance would bring to the salaried employees advantages as well as disadvantages. The advantages are the following: The Empire pays a subsidy to all pensions of workmen insured in the invalidity insurance institutes but not to pensions of salaried employees insured in the salaried employees' insurance institute. In the invalidity insurance the waiting time is only 4 years, in the salaried employees' insurance it is 10

[1] Blankenstein, Hans. Beseitigung der Angestelltenversicherung. Berlin, 1917. 36 pp.

years. During the present war salaried employees are seriously affected by this provision. As the salaried employees' insurance came into force on January 1, 1913, it does not entitle its members to a pension if they have been disabled in the war nor do the survivors of members killed in the war have claim to a pension. The provisions as to the suspension (*Ruhen*) of pensions are also more unfavorable in the salaried employees' insurance than in the workmen's invalidity insurance. In the salaried employees' insurance payment of pensions is suspended whenever the otherwise entitled claimant is in receipt of some other income of a specified amount. In such cases the contributions paid are lost. In the invalidity insurance the payment of pensions is not made dependent on the income of the beneficiary from other sources.

On the other hand, salaried employees would be at a disadvantage if insured in the invalidity insurance institutes for the following three reasons: First, the salaried employees' insurance institute pays pensions if the earning capacity of the insured member has been lessened by 50 per cent. The corresponding percentage prescribed by the invalidity insurance institutes is 66⅔ per cent; second, the salaried employees' insurance institute pays pensions to widows in good health, while the invalidity insurance institutes pay widows' pensions to invalid widows only; third, the salaried employees' insurance institute pays pensions to orphans up to their completed eighteenth year of age, the invalidity insurance institutes only up to their completed fifteenth year of age.

The Vorwärts suggests that the dispute could easily be settled by admitting salaried employees to all the advantages of the invalidity insurance and by increasing the present benefits of the invalidity insurance for members willing to pay an extra premium.

HOUSING AND WELFARE WORK.

SOCIAL BETTERMENT WORK AMONG EMPLOYEES' FAMILIES.

BY ELIZABETH A. HYDE.

It must be evident to the most casual observer of industrial conditions that social betterment work in more or less isolated communities becomes a matter of the employee's family and not of himself as a part of the actual working force. Steel mills and coal mines have their wash and change houses for the workers, and their first-aid and hospital provisions; but their clubhouses and libraries, their recreation grounds and social gatherings, their nurses and welfare workers generally are for the benefit of the community and not alone for the men within the plant. No other industry studied in the recent investigation of welfare work by the Bureau of Labor Statistics—which covered 431 establishments, having a total of more than 1,660,000 employees—approaches the two mentioned in the amount of work done among families, with the exception of cotton manufacturing in the South. Examples of conspicuously good family work are found, however, in many other industries, notably foundries and machine shops and explosives. There are, of course, great differences in the amount and excellence of the work done by various establishments, depending to some extent on the nature of the working force and the isolation of the plant but far more on the character and ideas of the employer.

Of the 431 establishments for which schedules were secured, 158, with a total of about 838,000 employees, were found to be doing more or less social betterment work among their employees' families, generally along the following lines:

(1) Improving the dwellings and the streets, installing sewerage, lighting, and water systems, and assisting in gardening.

(2) Providing educational, religious, and recreational facilities.

(3) Introducing to the community a nurse or other capable visitor to advise in the care of the sick and the children, to instruct in American methods of home making, to develop the community spirit by organizing and fostering clubs, and to be the sympathetic friend in time of trouble.

Work of this kind has transformed squalid towns into clean and attractive places and has much improved their standard of living.

The extent to which the various branches of betterment work are carried on by the companies reported in the present study is shown in the following statement:

Per cent of the 158 establishments doing each kind of work.

Visiting nurse	53.80
Playground	39.87
Domestic-science classes	27.22
Welfare worker	26.58
Charitable relief	26.58
Settlement house	19.62
Kindergarten	18.35
Land for gardens	17.10
Christmas presents to others than needy	14.56
Classes other than domestic science	13.29
Prizes for gardens	11.40
Doctor	8.23
Day nursery	5.70
Clinic	5.06
Christmas gifts to needy	3.80

LIVING CONDITIONS.

Many of the four and six room houses recently constructed have porches, pantries, and clothes closets, and are neatly fenced. In some of the towns practically every house has running water and sewer connection. Electric lighting is becoming general. The best houses have bathtubs. Employers who complain that the bathtubs installed are used as coal bins, or not used at all, probably overlook the fact that in many cases water must be heated and carried to the tub in the old-fashioned way and that bathrooms built on porches are likely to be cold. The community bathhouse, with separate compartments or buildings for the women and children, exists in several places. These bathhouses may be inexpensively installed and maintained and are considered by at least one mill manager in the South the most satisfactory of the various forms of welfare work attempted.

Streets are graded, walks laid out, and young trees planted. In certain cases landscape gardeners are employed to supervise the town planning and instruct in gardening. Some employers are finding that fences, unless of wire or metal, are an expensive feature; they fall rapidly into disrepair and sometimes are willfully destroyed for firewood. In a number of cases all fences have been removed and company land at a distance is allotted for gardens and stock, the maintenance of unfenced gardens being difficult or impossible. In other cases a fence of metal posts and wire is used.

In some instances gardens are plowed free of cost by the company or the plow and team are lent to the householder, and the free dis-

tribution of seeds and cuttings is not uncommon. In a large proportion of cases, however, the householders are able to finance their garden plots and the employer contributes only supervision and prizes. "City beautiful" contests, with generous prizes for the best lawn, best flower garden, best vegetable garden, best porch or window boxes, and best general appearance, stimulate the householders' interest in a new community.

Children's gardens on company land are reported by 27 of the 158 companies doing work among families and 18 companies give prizes or otherwise encourage home gardening. In the towns of one company alone there have been as many as 7,000 gardens, or 95 per cent of the total number that could be planted, the average value of the vegetables grown being over $20 per garden. Where gardening is undertaken on a considerable scale the work is in charge of a paid instructor, under whose supervision the children must work in the gardens for a certain number of hours a day. In one notable case the company provides for each of 80 boys a plot 53 by 11 feet, and there is a cooperative plot which all must help to work. It gives the whole time of an instructor, the seeds and plants, overhead-sprinkler system, tools, wheelbarrows, express wagons, diaries, books and papers, club rooms, and prizes. The course lasts two years. The boys are incorporated as a stock company under the laws of the State and elect their own officers.

PROTECTION OF HEALTH.

The health of the industrial community is recognized as of such importance that measures for its protection form the largest single department of betterment work as reported in this study. Some of the measures in operation in a number of industrial towns are as follows: Draining or filling in of pools and lowlands, or their treatment with crude petroleum, to exterminate the mosquito; screening of houses, at cost or without charge, and the distribution of circulars explaining in a simple way the dangers of the house fly; provision and care of garbage cans; bacteriological analysis of the water used for drinking; regulation of the milk supply.

Of the 158 companies under consideration, 85 report that they have a visiting nurse, or some one acting in that capacity, who, in addition to actual care of the sick, instructs the women of the community in nursing and in the preparation of food, and teaches the value and necessity of cleanliness and the benefit of fresh air and sunshine. Quite often the nurse's headquarters are the community house or model cottage described in a later section of this summary (p. 201). It is not unusual for her employer to give her the use of an automo-

bile. These persons usually are under the direction of the company physician or plant manager, though they may be connected with the district nurse association where such an organization exists. It has been found that where a visiting nurse has been installed in a community, and her services have been announced as free to employees' families, men in whose homes there is sickness work more regularly and with easier minds than formerly, to the great benefit of the shop.

The following statement of family visits made by two nurses in one summer month may be regarded as typical of the better class of work done:

Object of visit.	Visits in district A.	Visits in district B.
Domestic science	37	60
Sanitary hygienics	28	52
Dinner buckets	.....	41
Care of babies	103	36
Care of mothers	.....	35
Care of sick	107	46
Employment sought	6	31
Employment found	18	31
In regard to circumstances	51	54
Placed in sanitariums	5	2
Sent to hospitals	4	5
At request of schools	.....	23
Total	359	416

Several companies in the South report that medical treatment of the families is supplied at little or no cost to them. This is, of course, exclusive of the arrangement whereby the employees' fees cover also their families, and also the practice in some villages of limiting the fees which may be charged by private practitioners.

Free clinics, or clinics charging for medicines only, are conducted in eight of the cases reporting; three of these give dental and one gives optical treatment. In one case toothbrushes have been provided free to school children by the employing company, free dental treatment is furnished children in the first and second grades, and lectures on the care of the teeth are given before adults and the children of the higher grades. The optical work comprises tests, prescriptions, and the provision of glasses at cost.

At least one company has a first-class milk clinic dispensing certified milk at less than cost to the public and without charge to the destitute, and prescribing for infants through a corps of nurses and a doctor; another company sells milk below cost; four companies do antituberculosis work; two or more vaccinate against typhoid; and three have fresh-air camps to which invalids may be sent. In one town a 2-cent lunch is served to the school children and in another the experiment is being made of serving school lunches free. One

company has a fund for crippled children and many make a practice of paying for hospital and surgical treatment in necessitous cases.

Day nurseries for the small children of mothers employed outside of the home are reported by nine companies, the majority being in the South. Children between 4 months and about 8 years of age are received in the nurseries, and the usual charge is 5 cents a day. A higher charge may be made if the father is employed, and one nursery reports that slightly more is asked in midsummer to cover the cost of ice. Nursing mothers are allowed by the employer to leave their work two or three times a day.

RECREATION.

Of recreational facilities the most common are the baseball field and the children's playground. These are found almost invariably where community work of any magnitude has been undertaken, and vary all the way from "a piece of land where the men play ball" to a large and extensively improved field, with high fence, box office, grand stand, dressing rooms, moving-picture apparatus, and refreshment stand; and from an unfenced plot with a swing or two and a seesaw to an elaborately equipped inclosure that would put to shame many a city playground. Sixty-three companies, or 40 per cent of all reporting family work, have playgrounds of one sort or another. As in all the other activities described, this of course excludes places where the welfare measure in question is provided by the community or other agency so that it is unnecessary for the employer to undertake it.

The equipment of one playground, which has an attendance of between 200 and 300 children at a time, is as follows: 1 shelter house, 2 toilet houses, 2 bathhouses, 1 swimming pool, 1 wading pool, 2 drinking fountains, 2 sand boxes, 1 jump pit, 2 volley-ball courts, 1 baseball ground, 6 box swings, 12 rope swings, 6 seesaws, 1 giant stride, 1 large slide, 1 small slide, 4 flying rings, 4 climbing poles, and 3 horizontal bars.

Unless the children are few and the equipment is of the simplest there is generally a competent person in charge of the playground, and sometimes there are several such persons, including volunteers. In some cases sewing, carpentry, basketry, and other handwork are taught, and folk dancing is general. Almost invariably the behavior of the children improves rapidly, playground work being one of the most satisfactory of welfare undertakings.

For the older members of the community there are athletic fields, soccer and tennis courts, and basket-ball grounds, the equipment for which is provided by the players or lent to them by the caretaker of the grounds. In the South the question of parks for the people

has for some time been receiving attention; 14 of the companies reporting have parks of some sort and 3 others have immediate plans therefor. Here again the variety of standards is very great. A "park" may be merely an unimproved piece of woodland which the employer has decided to leave in its natural state as a pleasure place for the people, either with no equipment at all or with benches and perhaps a band stand; or it may rival the most beautiful small parks in existence, with club facilities, dancing, skating, games, and music, in an exquisite setting of trees, grass, flowers, and running water.

Indoor recreation is commonly provided by means of a club or settlement house, managed by the employees themselves, by paid social secretaries, by churches, or by the Young Men's or the Young Women's Christian Association. The church mission is active in the South, and among the 8 reported in the present study there are good and bad examples of its occupancy of the field. Ordinarily the mill not only provides the cottages used in the work, but assumes no inconsiderable part of the financial burden of the work. The missions do work similar to that of secular institutions in recreation, education, nursing, sanitary supervision, etc., with the addition of religious services on Sunday. Where two or more mill villages are a short distance apart, one mission may extend its activities, devoting certain days and evenings to each village.

The industrial department of the Y. M. C. A. has been in operation in the South for many years, and 3 of the companies report that their educational and recreational work is done with success under these auspices.

In a notable group of western mining camps the betterment work has been undertaken by the Y. M. C. A. upon vote of the employees. The company provides the buildings and equipment and the Y. M. C. A. assumes full responsibility for the methods and policy of operation. Clubhouses which are models of their kind—representing an expenditure of from $15,000 to $25,000 each—are being erected in the various camps, and some 20 secretaries and 10 trained women workers already are employed. The families of the men attend the moving-picture shows and on certain days and evenings are allowed to use the bowling alleys and pool room, gymnasium and baths, library and reading room. In at least one case where assimilation is difficult, foreigners of one nationality are given the exclusive use of the building for a few hours each week, since in no other way can they be induced to visit it.

Fees for games, like minor furnishings, classes, refreshments sold, and other unimportant details, vary from camp to camp, but the

members' dues—50 cents a month or $5 a year for men and 15 cents a month or $1.50 a year for boys under 16—are uniform. On Sundays the games are free to members, who alone may play, and they may be indulged in all day except during the hours of religious service. This is but partial evidence of the commendable breadth of view with which the work is being conducted. In order that membership fees may be kept within the reach of all, the company makes a monthly appropriation toward operating expenses, besides paying for heat, light, water, and repairs. Some branches are so successful that the company's cash contribution has been materially reduced, if not entirely suspended. The receipts of the soft-drinks counter, which dispenses also ice cream, candy, cigars, tobacco, and perhaps sandwiches, amount sometimes to several hundred dollars a month.

There are communities where the betterment work is successful only when carried on by the Y. M. C. A. or other outside agency, largely financed by the employer but without other participation by him. Where wages are high the work may be done to no small extent by the employees themselves, the company providing almost always the initiative and the buildings and in many cases the heat, light, and equipment. A conspicuous example of employees' management is a textile mill having between 15,000 and 20,000 operatives where an employees' organization of more than 1,600 members, with annual dues of $2 and a fund raised by entertainments, conducts the excellent clubs and classes and much of the recreational work. The company houses and otherwise assists the organization, and provides visiting nurses, dental clinic, and recreation grounds for adults and children.

The settlement house—or community house of the South—ordinarily is a more humble affair than the club buildings mentioned, though there are notable exceptions to this rule. Thirty-one, or 20 per cent, of the companies reporting conduct their welfare activities through this medium. The accommodations vary from one of the workers' dwellings or a disused official residence to suitable buildings put up and equipped for the purpose. Where the house is small it may be the model home of the community, furnished and operated in such manner as the other householders would do well to imitate. Cooking classes meet in the tiny kitchen, housekeeping classes make the beds and sweep and dust. A few shelves of books and a dozen magazines constitute the library; chess, checkers, and pinochle, the games. Though probably it may be said with truth that so simple an endeavor as this makes little appeal to anyone but the children of the community, it is a fact that the children are of the greatest importance unless we except the older girls who will become housekeepers within a few years. If the worker in charge is a mature, capable, and tactful woman who succeeds in gaining the confidence

of the women of the community by friendly visiting and nursing, her influence is strongly felt.

Where the house and equipment are more elaborate, accommodating considerable numbers of persons in the various rooms and having many activities, the settlement more nearly resembles a clubhouse, and accordingly meets with the response deserved by such outlay. Some half dozen of the cases reported belong to this class.

The head worker of one of these large and successful settlement houses recommends that social work in an industrial community should invariably begin through such an agency. First, it can and should begin in a small way, developing as the needs of the community become apparent; second, it should begin with educational work for the children, preferably through a kindergarten, since the workers are thus brought into contact with the homes; third, its policy should be flexible, without distinctions as to sex, race, or creed; and fourth, it should be undertaken in a spirit of willingness to meet the demands for increased equipment and enlarged quarters as the work grows.

Social affairs may be arranged by the welfare workers at no cost to the community, but the indications are that the most popular affairs are at least partly managed and financed by the people. In a large number of cases the most important day of the year, to the families as well as to the employees, is the field day or other outing in which practically everyone participates. In the mining and steel communities the occasion is elaborately celebrated, with parades, first-aid contests, races and competitive events, penny scrambles for the children, and other entertainment. Visitors attend from miles around and the affair receives considerable notice from the press.

In the southern cotton-mill villages the churches generally manage the annual outing, assisted financially by the mills. As a rule, several mills combine, and Independence Day is chosen for the festivity, which ordinarily is an unpretentious Sunday-school picnic. Of the 42 cotton mills reporting, 15 have an annual gathering of this character.

Christmas celebrations are reported in 29 cases. These range from the giving of baskets of provisions to needy families only, to the presenting of a ham, turkey, cake, basket of fruit, or $5 bill to each family in the village, and the setting up of a community Christmas tree, with instrumental music and singing and the distribution of candy, apples, and small gifts to the children. One company reporting has given to each of 4,000 children a pound of candy, an orange, and two apples.

RELIGION AND EDUCATION.

The building, or assistance in the building, of places of worship is common. Among certain races of foreigners, as among the mill people of the South, the religious instinct is very strong, and the community is made better and happier by having a church building within easy reach. Occasionally the company finds it necessary to give financial assistance in order to secure the services of a capable minister, and in a few cases such person acts as welfare worker in the village.

The school is another institution the improvement and fostering of which, in a community where the employer is practically the only taxpayer, may contribute to the welfare of the people. In some Southern States there are examples of remarkable cooperation on the part of the mills. The term is lengthened by several months, a better class of teachers is secured by the payment of higher salaries than are provided by the State, beautiful buildings are erected, and a rule that no man may remain in the employ of the mill who does not send his children to school acts in the place of the nonexistent State law. Other features are the operation of kindergarten and elementary grades in villages too far from the State schools for the attendance thereon of small children, the assembling of mixed classes for older, backward pupils ashamed to go to school among the little folk, and the carrying on of high-school work in places where the State makes no such provision. Sometimes the social work of the village is carried on by the teachers, their residence—provided by the company—forming the community or settlement house.

In the West is a children's community cottage the walls and floors of whose four rooms were tinted and stained by the boys of the school, while the girls made bed and table linen, towels, curtains, and dresser scarfs. The simple furniture was bought by the children, who raised a fund by giving entertainments. Here the girls are taught housekeeping, and the mothers of the various nationalities are entertained at luncheons or afternoon parties. In this community school credits are given for work done by the children in the homes, either in duties about the house or in teaching English or other subjects to the parents.

WELFARE WORKERS.

The character of the person charged with such welfare work as requires family visiting or other intimacy is of the utmost importance. Health, balance, courage, patience, sympathy, and infinite tact are essential. The wisdom of this worker's having a time and place on which no one may intrude, and occasional leave of absence

for refreshing and stimulating contact with other social workers and with the outside world, is undoubted. There may be great harm in work done half-heartedly or in a haphazard way; consequently it is of first concern that the workers keep fit.

The experienced welfare worker or nurse may be intrusted with a small relief fund not too closely scrutinized, and frequently may be consulted with advantage regarding proposed dismissals or other harsh measures. Where the labor turnover is considerable, she may, by her census of families, keep the management informed on many things of significance. Even when supported largely by outside agencies, such as a church mission, the worker should cooperate as closely as receives response with the management of the industry. A tactful visitor to the homes may, through her knowledge of wages and income, suggest a wiser expenditure, more careful housekeeping, or—conversely—the retention in school of a child of legal working age, or the return to home work of an employed mother. She may interest the families in cooperative buying; stores conducted under this system exist in several of the industrial communities reported and cooperative buying of one or more articles of large consumption is practiced in many others.

Work of great value is being done in teaching the nursing of the sick, the care of babies, the wholesome preparation of food, the economical making and repair of clothing, the cleaning and ventilating of the home. The first and second named are universal needs, while ignorance of good cooking is especially prevalent among certain classes. According to the schedules, sewing is more generally taught than is cooking, perhaps because the latter requires a more elaborate equipment and frequently forms part of the public-school work. A wider use of the sewing machine should be encouraged as more practical than handwork after the rudiments have been acquired, and young people can thus be interested in making simple clothing.

ORGANIZING OF CLUBS.

The clubs organized by welfare workers in the communities studied vary in character from the toothbrush brigade or the Blue Birds (girls too young for the Camp Fire) to civic organizations of no mean standing. One of the latter class is transforming a foreign colony in the Middle West which has had anything but a favorable reputation into a respected and self-respecting community. Married women's clubs, though in successful operation in 20 cases among the southern cotton mills reported, are not easily managed. It is difficult to get busy mothers out, and some of them object to being supervised by a woman perhaps their junior, probably unmarried, and almost certainly of another class than their own.

Boys' clubs are a problem everywhere. One Y. M. C. A. clubhouse with three paid workers has temporarily abandoned its boys' room because the supervisors can not prevent rowdyism. The Boy Scout organization has hundreds of branches in industrial communities and these are a success practically everywhere. Manual training is always an outlet for youthful energy; first-aid teams are excellent, as is the work in the gardens, described in an earlier part of this summary.

For girls the field of sewing, fancy work, weaving, basketry, cooking, home making, nursing, child care, first aid, and surgical dressings is almost limitless. There are many branches of the Camp Fire organization, and gardening and canning clubs are numerous. One mill village in the South has recently opened a beautiful clubhouse for its girls, the management here evidently believing, as a superintendent elsewhere is quoted as saying, "Raise up a generation of fine girls and the question of the men will take care of itself."

NECESSITY FOR THE WORK.

While the ideal American condition is one under which the community, entirely distinct from the employer, provides for the welfare of its citizens by means of clinics, playgrounds, libraries, educational classes, social centers, etc., where an industry is carried on at a distance from a city these things must be provided in some other way. Nor can the working people themselves, in the great majority of cases, be expected to make such provision. Scores of communities exist in which recent immigrants largely outnumber the native born, and where American standards of living are as little understood or desired as in the villages of southeastern Europe. Furthermore, the establishment of these things requires considerable outlay of money, and even where wages are fair the greater part of the burden must fall elsewhere than on the wage earners. To quote from an industrial settlement worker already referred to in these pages:

> But the wage that is fair to the workman from the point of view of value given to his employer does not mean to the large mass of laborers a wage that is sufficient to keep his family in more than the necessities of life. It does not mean that he is able to provide anything in the way of education which the public does not offer him. It does not mean that he can provide suitable recreation for his children and it does not mean that he can provide them with books. Therefore, whatever the laborer and his family are to have above and beyond the necessities of life, must, under present conditions, come entirely from outside sources. Man as a unit is not worth sufficient wage in many cases to give advantages to family and, in far too many cases, would not use money for such purposes when earned. The body of workmen, representing composite labor of an organization, should have, not as charity, but as business justice, the best the company can afford to give them.

SOCIAL AND EDUCATIONAL ADVANTAGES FOR EMPLOYEES.

BY ANICE L. WHITNEY.

In several of the recent issues of the MONTHLY REVIEW, articles discussing various phases of the work for industrial betterment as carried on by employers have been published. The present article deals with the means taken by many of the companies for the entertainment or the mental stimulus, through lectures and club work, of employees outside of the working hours. Four hundred and thirty-one schedules were taken, covering a wide range of industries, such as mining, many kinds of manufacturing, public utilities, offices, and stores.

The work of directing the amusement of employees is one that must be approached with care by the employer. Many firms have made little or no attempt in this direction, preferring to provide some of the more essential forms of betterment, such as emergency hospitals and lunch rooms, and to leave to the individual the question of what shall be done with his leisure hours. In some cases the distance of the plant from the homes of the workers has militated against anything of this nature being tried, or if begun, has necessitated its abandonment; in other cases the feeling that the employee would object to any interference on the part of his employer with the time which is his own has prevented attempts by the members of the firm to institute any of the various means of amusement. It is perhaps easier in this line of service work than in any other for the employer to assume a paternalistic attitude, and it would appear from the reports that this is felt by many employers, who have found it wiser, in order to avoid the danger of employees suspecting such a tendency on their part, to leave the development of the recreational features to the employees themselves, with the knowledge that proper efforts along these lines will be assisted and encouraged by the company.

In the following table the establishments furnishing one or more of these features of recreation or culture for their employees are given by industries:

ESTABLISHMENTS HAVING SOCIAL GATHERINGS, LECTURES, MUSIC, OUTINGS, ETC., BY INDUSTRIES.

Industry.	Number of establishments.	Number of employees.	Number of establishments having—								
			Social gatherings.	Lectures.		Moving pictures.	Auditoriums.	Music clubs.			Outings.
				Safety.	Other.			Bands.	Orchestras.	Glee clubs.	
Automobiles	7	87,773	4	.....	.....	.....	1	3	1	2	5
Boots and shoes	5	23,930	4	.....	2	1	.....	3	.....	.....	2
Chemicals and allied products	7	13,539	3	.....	1	1	.....	.....	.....	.....	3
Clothing and furnishings	9	8,833	9	.....	2	2	.....	.....	.....	3	1
Electrical supplies	5	77,733	4	.....	2	1	.....	.....	1	2	2
Fine machines and instruments	5	15,031	4	2	4	1	.....	3	1	2	3
Food products	9	14,216	7	.....	2	1	.....	2	.....	2	4
Foundries and machine shops	31	85,350	17	7	7	4	9	8	2	1	15
Gas and electric light and power companies	8	[1] 23,268	7	.....	3	1	2	2	2	1	6
Iron and steel	12	106,483	4	3	3	2	1	2	.....	.....	8
Offices	9	13,814	9	.....	5	1	2	2	1	1	5
Paper and paper goods	5	7,243	4	.....	1	.....	.....	.....	1	.....	2
Railroads:											
Electric	15	55,046	11	4	5	.....	5	5	1	.....	13
Steam	7	352,774	7	.....	1	4	6	.....	.....	.....	1
Rubber and composition goods	7	36,788	6	.....	1	.....	.....	.....	1	.....	5
Stores	32	89,443	26	.....	6	1	.....	4	3	4	18
Telegraph and telephone companies	9	[2] 35,517	7	.....	3	.....	.....	.....	1	1	8
Textiles	38	40,229	27	5	7	.....	8	15	2	1	16
Other industries	54	[2] 132,140	28	3	15	12	29	7	5	3	24
Total	274	[3] 1,219,150	188	24	70	32	63	56	22	23	141

[1] Not including employees of 2 establishments, not reported.
[2] Not including employees of 1 establishment, not reported.
[3] Not including employees of 4 establishments, not reported.

There were 274 establishments—of which number 270 reported the number employed to be 1,219,150—which reported entertainment, either indoor or outdoor or club work among employees, contributed to in some degree by the employer. In 188 of the establishments social gatherings, such as dances, banquets, theatricals, or parties are held on special occasions like Hallowe'en or Christmas. Dances, being the easiest form of entertainment and the one most generally enjoyed, of course predominate.

In the many cases where the companies have provided clubhouses the club committees, with the clubhouse as a meeting place, naturally assume the leadership in social affairs, and usually the fees for club membership cover the most, if not all, of such activities. Even though there is no clubhouse provided there are many establishments in which there are employees' clubs which promote and manage all gatherings of a social nature among the employees. In many establishments these clubs are purely recreational in character: however, in 22 instances the athletic association or the benefit association has

charge of the social affairs, and any surplus gained from them goes to swell the funds of these organizations.

Usually there are large rooms in the plants—either lunch rooms, recreation rooms, or auditoriums—which, with the expenditure of a little labor, can be temporarily converted into a dance hall or may be used for other amusements. Sometimes the use of such a room, together with heat, light, and janitor service, is all that is given by the company. Frequently when no room large enough is available in the plant, the firm hires a hall for the use of the employees for their social affairs. Other firms make a money contribution to the recreation club, and quite a number seek to bring all the employees together in a social way at one large affair during the year, in which case the expenses are usually met wholly or nearly so by the company. One of the street railway companies gives a free theatrical entertainment in the auditorium of its clubhouse each month, except during the summer, and each winter a vaudeville entertainment is given daily for one week in the same place, thus enabling all employees to attend some time during the week. Free tickets are given to all employees and their families and transportation furnished for all who attend. Several dramatic clubs are found which give plays, often several in a season; the minstrel show, also, is popular as a means of entertainment. Two companies presented very elaborate masques, each of which was written especially for the company giving it, and dealing largely with the evolution of the particular kind of work in which each of these companies is engaged. Both of these events included many of the employees as participants and were attended by thousands of spectators.

The activities of one of the large insurance companies along these social and educational lines are centered in the athletic association and an entertainment committee. The athletic association each year, under the sanction of the company, conducts an excursion which is attended by the clerks and members of their families and friends. Each year the association gives a concert or opera, in the company auditorium, followed by dancing. Aside from the orchestra, all of the participants are members of the company. For these affairs tickets are sold. Once or twice during the winter smokers are held for the men and a nominal admission fee is charged. A season's course of entertainment is arranged by the entertainment committee. These affairs, given entirely at the expense of the company, consist of lectures, concerts, and moving pictures, and are held in the afternoon immediately after the close of office. Noon-day concerts are also given twice a week by local talent in the company auditorium, which has a seating capacity of 1,000. These noon meetings are very popular. The auditorium has a grand piano, a concert phonograph,

a stereopticon, and a moving-picture machine. There are various musical clubs among the employees. For the purpose of better acquaintance among employees a dinner is given each year by the company to several hundred of the men, and about 150 of the women are given a luncheon each year for a similar purpose.

AUDITORIUMS FOR THE USE OF EMPLOYEES.

Each of 63 of the companies provides an auditorium either in the plant, clubhouse, or Y. M. C. A. building. In the 14 cases in which the seating capacity was reported, it varied from 300 to 5,500; the majority of these rooms, however, seated between 400 and 800. These auditoriums usually have an adequate stage and in most cases the seats are removable so that the room may be used for dances and other social affairs. One company with about 4,500 employees has two rooms, one seating 1,500 and one 5,500, each equipped with a pipe organ and a piano. The smaller room, in addition, is supplied with a moving-picture outfit. Musicals and illustrated lectures are given from time to time, some of which are free; others are given, however, to supply funds for some charitable purpose. Many of the large department stores use their public auditoriums for gatherings of the employees, but these stores have not been included with the 63 establishments reported, because the rooms are primarily for the use of the public.

LECTURES AND MOVING PICTURES.

Ninety-four establishments report the provision of lectures or talks to employees on various subjects. In some instances the talks are quite informal, being given to the employees during the lunch period or at the close of the working period. In 24 establishments the lectures were on "safety," and were frequently illustrated with stereopticon views. Also, moving pictures were exhibited—other pictures being shown to secure a good attendance—and a short talk on the subject given in connection with the "safety" reels. In 70 cases the lectures dealt with a variety of subjects, such as health, first aid, travel, current events, technical subjects, and plant problems. Two companies report that their lectures are given on the employer's time. One of these has weekly lectures on technical subjects; the other has occasional lectures on safety and health, which are attended usually by about 1,200 persons.

One company reports starting an evening course of lectures, but as the employees were widely scattered it was so difficult to get them together in the evening that it had to be given up. Two southern cotton mills report that lectures were tried but were discontinued because of lack of response on the part of the employees. On the

other hand, most of the establishments report a good attendance, varying, of course, with the interest to the employees of the subjects presented, in some cases the attendance being as high as 1,500 or 2,000 at a single lecture.

Moving pictures were reported in 32 cases. A few of the companies had moving picture machines in the building, but more often they were installed in the clubhouse or Y. M. C. A. building. Often, where the plant was located in a small town, the moving pictures were open to the public, and pictures were shown usually once or twice a week and an admission fee of 5 or 10 cents was charged. About the only advantage resulting to the people was that a better class of pictures was shown than could ordinarily be provided for that fee. When the moving pictures were shown in the plant or clubhouse, however, it was seldom that any fee was charged.

MUSIC CLUBS AMONG EMPLOYEES.

Musical organizations such as bands, orchestras, and glee clubs are quite numerous. Fifty-six companies report bands which range all the way from one of 10 or 12 pieces to organizations with 100 instruments. One company having many foreign-born employees has four bands, one of these being composed exclusively of Slavic and one exclusively of Hungarian players. The companies contribute to the bands in various ways. Many of them contribute instruments and uniforms and hire leaders and most of them provide a place for the band to practice. Those companies which make no contribution other than a place to practice have been excluded from the count, since it is probable that the value of this slight assistance is more than offset by the worth of the band to the company as an advertising feature. Sometimes these bands give concerts at regular intervals, in other cases an occasional concert is given, but usually the band plays at company picnics or outings and at other social affairs. In some cases the company pays for these services. One company having a band with 44 members has noon concerts on the lawns during the warm weather, which are attended by 4,000 of its employees. Another which has a band with 100 members provides a band hall containing a large room for rehearsals, clubrooms for cards, pool, and shuffle board, and a reading room well supplied with periodicals. Still another company has monthly concerts given by its band, to which no admission fee is charged and which are attended by about 3,500 people.

Twenty-two of the companies have orchestras and 23 establishments have choral societies or glee clubs. The companies usually pay the instructor, buy the music, and in several cases, both for bands and orchestras, the members are paid for the time spent in practice.

The orchestras range in size from 10 members to 100, the majority having from 25 to 35 members.

There is but one orchestra reported having 100 members. This orchestra started a few years ago with a membership of 12. It has been so successful, under a competent director, that at present it apparently has an influence upon the music life of the city since there is a series of concerts for the betterment of civic music given by it each year in one of the large concert halls. Concerts also are given for various large organizations in the city. The company pays all of the expenses, buys some of the instruments, and pays each member 50 cents for each rehearsal. This same company has a choral club of over 100 voices. The regular leader is an employee of the company, but a coach from outside is secured to finish preparing for the concerts, at which quite ambitious programs are presented. One large department store has a number of musical organizations. There is a large choral society, a girls' military band of about 40 pieces, a larger band of the same character among the young men, a girls' and a boys' drum and bugle corps of about 30 members each, and an orchestra of about 35 pieces. Concerts are given by these organizations in the store auditorium. One company having about 1,000 employees has them all assemble once a week at noon for chorus singing under the direction of a leader prominent as a conductor of community singing.

OUTINGS FOR EMPLOYEES.

One hundred and forty-one firms have outings for employees, to which they make some material contribution. These picnics or excursions are often attended both by practically the entire working force and their families as well. Often in very large plants each department of the plant holds its picnic independently. The numbers attending many of these annual outings are very large. Two companies report that about 20,000 attend the company picnic and another has an attendance of 12,000 for which the company pays the transportation and gives the prizes for the games. One company with about 15,000 employees has abandoned the annual picnic because it had grown to unmanageable proportions, and in place of it closes the plant for one day each summer and gives $1 to each employee. For a picnic attended by 8,000 persons, one company pays the transportation; that of another company attended by about the same number has all the expenses paid by the company, and for one with an attendance of 7,000, refreshments and prizes are furnished. In some cases where amusement parks are used for these outings the companies distribute tickets for the various amusements to each one who attends. One company furnishes transportation and the free use of park amusements to employees and their families, and also

prizes, aggregating about $100 in value, to the children. Another firm, which has an outing which is largely attended, turns over the management of it to an association of the employees. The company pays for the grounds, prizes, and transportation, and the control of the amusement concessions is given to the girls' club, which receives the profits for its welfare fund. Not until there was a practically unanimous desire evidenced by the employees of one steel mill for an outing was the matter taken up by the management. Committees of the shopmen had charge of all the arrangements and the firm ascribed the great success of these annual affairs to this fact. Much of the success of these outings seems to be due to the fact that they are nearly always managed in a democratic way. This, and the fact that the expense attached is usually so slight as to make it possible for all to attend, contribute to make them one of the most popular forms of recreation found among the companies visited.

CONCLUSION.

It is apparent from much of the work that has been reported along these lines of recreation and of club work that considerable executive ability must be displayed by the employees concerned in the management of these large social affairs, and that the musical and dramatic clubs prove not only that there is much promising material among the rank and file of the workers, but also that these opportunities which are given to them to broaden the scope of their interests and therefore to get away somewhat from the ordinary routine of work must necessarily serve to arouse and encourage their ambition.

MINERS' HOUSING IN SCOTLAND.

It was the Scottish Miners' Federation which was primarily responsible for the investigation of housing conditions in Scotland,[1] and for that reason, if not also because of the magnitude of the mining industry and its importance for Scotland, the Scottish Housing Commission has covered the field of miners' housing very extensively.

As late as the eighteenth century coal miners and salt workers were bound by law to their employers, so that if they left the employer "such deserting colliers as had received 'fair wages and fees' were to be held as thieves and punished in their bodies." The famous and historic woman and child labor commission of 1840 inquired

[1] For general summary of the report of the Scottish commission on housing of the industrial classes, see the MONTHLY REVIEW of the Bureau of Labor Statistics for December, 1917, pp. 229 to 234.

somewhat fully into conditions at the mines and in the homes of the miners. Home conditions were described as a "picture of filth and poverty." "The hut is a wretched hovel, perhaps 10 to 12 feet square, in which a family of from 6 to 10 individuals are huddled together."

Some of the present features of miners' housing in Scotland are of note. In the planning of the villages the line of least resistance has been adopted; houses have been built of the cheapest available material and arranged in straight rows placed in parallel lines; there has been a want of provision of garden space in many instances; consideration has not been given to drainage; and houses have been faced upon waste heaps. There are, however, cases where model villages and houses have been provided, but subsequently neglected in upkeep.

The scarcity of gardens can not be accredited to a disinclination for the extra work involved on the part of the miners. The lack is more likely due to other factors, such as (1) short tenure of the dwelling and garden, (2) inadequate fencing, and (3) remoteness of the garden from the house.

Defective roads and footpaths are a characteristic of most mining villages; lighting in many mining towns has been neglected; ashpits are particularly numerous, prominent, and offensive in the older row-house communities. Privy accommodations are declared to be the very worst feature, so much so as to be "an abomination and danger to the community."

The chief causes of defective sanitary provisions are (1) inertia and custom, (2) lack of legal powers of enforcement, and (3) lack of adequate water supply. The latter, however, is undoubtedly the most important factor.

The report expresses no doubt as to the prevalence of overcrowding in the mining regions of the country. There is in these regions a considerably larger proportion of the population living in one and two room houses than elsewhere; and over one-fifth of the population in the mining counties live more than three persons per room, the range in the eight counties being from 21.3 per cent to 39.7 per cent. The committee places the responsibility for overcrowding upon the local authorities, who fail to enforce what powers they have in the matter. Enforcement of existing powers would compel mine operators to erect more and larger houses.

Regarding the size of company houses, no exact figures are available. An estimate for a certain region gave 11 per cent of the total as one-room dwellings, 65 per cent as two-room dwellings, and 24 per cent as dwellings of three rooms or more. This excludes larger

houses of managers and others. In general, a half or more are two-room dwellings and a sixth to a fourth are one-room dwellings.

The report describes the houses as follows:

> The typical miner's house has only one story, though in a few recent cases attics have been added, or cottages have been built on the double-flatted principle. In the older rows the houses are commonly "but and ben" or "single end." It is exceptional for them to be built back to back, but even when this is not the case the window in the back wall is either nonexistent or too small to be effective. The more recent rows consist for the most part of "through" houses of two apartments. There is usually a small square lobby inside the door. The kitchen, which also serves as living room, has two bed recesses in the wall opposite the fireplace. Usually these are open for their whole width and height, but may be partially screened by curtains. Opposite the window a door gives communication directly into the "room," which commonly has a fireplace on one side and a single bed place on the other. Dr. McVail estimates the average size of these apartments in the central coalfields as: Kitchen, 15 feet by 10 or 11 feet by 9 feet, its cubic capacity being about 1,400 cubic feet, or with the bed places about 2,000. "The room is of the same width and height, but is probably somewhat shorter from front to back."

Improved houses are slowly taking the place of old and defective houses. The larger houses are appreciated on the whole, though the response to the new standard is not immediate. The housewives are a factor in encouraging improved conditions.

Rents are generally low. The house is looked upon by the miner as a perquisite of his employment. There was a time when the use of the house was a part of the wages, and not even nominal rates were charged. This does not appear in practice to be far removed from the system by which employees have their rent deducted from their wages at the time of payment. Low rents have a bad effect both on the miner and the mine owner. Furthermore, low rents should be considered in the light of the fact that in some mining centers the "standard of habitability" is so low that rent in the ordinary sense does not enter into the minds of colliery owners or the miner tenant. The houses are looked upon as a part of the colliery plant—and that the least expensive for producing as large and remunerative an output as possible.

The proportion of wages paid in rent is usually about one-twelfth to one-tenth, or is even as low as one-seventeenth. The proportion is lower than that paid by store clerks—one-sixth to one-eighth; by skilled workmen in building trades—one-eighth to one-tenth; and by workers in miscellaneous trades—one-ninth to one-tenth. Miners not in company houses pay higher rates in proportion to wages.

The majority of the informants before the commission stated that the miners would willingly pay a higher rent if improved houses were provided. Complaint as to the rent charged was usually connected with a complaint as to the conditions of the house.

Because of these low rents the financial return on miners' houses is small. On 976 workmen's houses built since 1874 by one company in Lanarkshire there was a gross return of £7,167 ($34,878.21), or 5.57 per cent on a house cost of £128,593 ($625,797.83). The total annual expenditures amounted to £3,640 ($17,714.06), or 2.83 per cent of the capital. Expenditures included 0.57 per cent for scavenging, 0.29 per cent for land, 1.15 per cent for taxes, and 0.82 per cent for repairs and materials. If depreciation is allowed for, the return would be reduced to 1.65 per cent. These figures do not take account of the proportion of rental expended in some years for permanent improvements.

Another company built 973 houses containing 1,678 dwellings, returning a gross rental of £5,360 19s. 7d. ($26,089.20). Here the return is 2.83 per cent or 1.77 per cent after deduction has been made for depreciation.

Cost of upkeep and repair, including taxes, commonly amounts to 50 or 55 per cent of the rental received.

As to the extent of company housing in Scottish mining districts, only scant information is available. For the principal mining county—Lanarkshire—about 38.7 of the houses occupied by miners are owned or leased by the coal companies. Over the mining counties as a whole about 34 per cent of the miners live in company houses.

The policy of company control of housing is briefly adverted to by the commission. It is noted that both employers and employees regard the provision of houses by the employer as the second best course, but in isolated districts at all times, and in all districts for a considerable period before the war, the responsibility has been thrown more and more upon the employer as outside builders have shown no readiness to meet the situation.

As private enterprise has therefore failed to provide the necessary houses either in the mining industry or anywhere else, the commission concludes that the State must assume direct responsibility for housing, for only in that way can the existing shortage be overcome. For the provision of proper housing for miners the observation of town-planning principles in rural districts should be compulsory as at present in urban districts. There should be a limitation upon the number of houses per acre and provision made for garden and recreation grounds. The local authorities, too, should be given power of approval of all water and drainage schemes, introduction of water into houses, and provision of suitable and adequate sanitary convienences, outbuildings, etc. Furthermore, to secure proper conditions of habitation the rural local authorities should have power to compel the proper maintenance of all premises and, more particu-

larly, to compel the provision of removable rubbish and garbage receptacles. While primary responsibility rests with the employer in the matter of subletting, there is much that the local authorities can do if adequate authority were given to them. The chief difficulty here is that it is in the interest of the employer to connive at overcrowding when there is a shortage of houses and great need of labor.

The recommendations of the minority of the commission do not differ fundamentally nor very greatly from those of the majority. They do not, however, lay as much stress on the evils of the policy of company housing as do the majority. It is suggested that trade-unionism furnishes an adequate safeguard against the misuse of the company house in time of labor disputes.

VOCATIONAL EDUCATION.

ANNUAL REPORT OF THE FEDERAL BOARD FOR VOCATIONAL EDUCATION.

The war has served to emphasize the need for vocationally trained men and women and the want of facilities for vocational training, according to the first annual report of the Federal Board for Vocational Education. To supply the need by making use of such facilities as are available the board has called a meeting for December 19 of those officials in the 48 States to discuss ways and means. In the call it is pointed out that the Army is in need of 200,000 men in 50 different trades. The war, so to speak, has found the United States "*vocationally unprepared.*" It has been the task of the board since its organization late in July of this year to proceed as rapidly as possible to perfect the machinery of cooperation with the States and with the other Federal departments.

The War Department has requested the board to organize courses throughout the country for the training of conscripted men of the second and subsequent drafts. Tuition is free and certificates of efficiency will be issued for the work done. As part of this work the board has organized 50 night schools to train radio and buzzer operators. About 5,000 are enrolled in these classes.

At the request of the Shipping Board the vocational board is now engaged in making a vocational survey of the shipbuilding occupations, analyzing particularly those occupations in outside industries very similar to or almost identical with the shipbuilding occupations. For workers in such occupations little training will be required for fitting them into the shipbuilding industry.

Another war activity to which the vocational board has addressed itself is an investigation into the question of vocational reeducation and placement of disabled soldiers and sailors.

This investigation, which is already well in hand, includes the study not only of the probable number of men thus returned, but also a review of the economic issues involved, a discussion of methods of financing and administering the work of reeducation, an examination of possible agencies and methods of cooperation, and a study of the kinds of workshops necessary to promote further vocational education in these classes. In this task the board has been able to secure the services of experts who have brought to the problem a fund

of special knowledge, without which progress would have been impossible. Plans are under way for cooperation with the Office of the Surgeon General of the War Department.

The board comments, as follows, on the importance of the act creating it:

By far the most important event of the 12 months just passed in vocational education was the passage of the Smith-Hughes Act. This event has marked the beginning of a new era in vocational education in the United States. From now on vocational education is a matter to which the energies of both State and Federal governments will be directed. Its establishment means much for the defense as well as for the prosperity of the people of the country. It means an immediate extension of our secondary public school system so as to furnish practical education for the wage-earning employments. It means, furthermore, that this extension will be carefully planned and ordered. It means an end to haphazard extension of vocational education. It means that a program can be agreed upon and can be developed progressively from year to year.

THE NEGRO WORKER AND HIS EDUCATION.

SUMMARIZED BY W. CARTER RYAN, JR.

The economic, social, and industrial problems inherent in the existence of a racial group of ten millions of Negroes in a nation of a hundred millions are graphically set forth by Dr. Thomas Jesse Jones, of the Phelps Stokes Fund and the Bureau of Education, as the background for his study of Negro education in the United States.[1] This study has been carried on during the past four years, and included personal visits to every private or higher institution for Negroes in the United States.

"Inadequacy and poverty are the outstanding characteristics of every type and grade of education for Negroes in the United States." declares Dr. Jones. He points out, however, that despite all limitations much excellent instruction, through public and private auspices, has been given to the colored people and that they have been able to achieve a degree of progress that speaks well for their future.

Conceding that many leaders of the colored race have been more eager for literary and collegiate instruction than for the teacher-training, agricultural, or industrial instruction that is considered essential, Dr. Jones shows that the educational ideals of the past have everywhere been largely literary and collegiate, especially in the South; that the Negroes have not had the opportunity of observing the increasing attention given to science, industry, and agriculture in education; and, further, that the colored man is naturally suspicious of any departure from the methods and customs which he believes to be still emphasized by his white neighbor. As Dr. Jones says: "The

[1] Negro Education, U. S. Bureau of Education, Bul. Nos. 38, 39. 1916.

various forms of economic bondage to which the Negroes have been subjected by white people seem to them ample evidence for their distrust of any economic feature in their schools."

It may be noted in passing that the Negro is not the only worker who is suspicious of attempts on the part of other groups in society to impose industrial education upon the masses—witness labor's suspicion of certain of the less tactful advocates of the Gary system.

Dr. Jones endeavors to show to the colored people the real possibilities of industrial education as conceived by Gen. Armstrong and advanced by his pupil, Booker T. Washington, namely, adaptation of all education, whether it be literary or industrial, to the needs of the pupil or community. It was the strength of these two men that they regarded industrial and agricultural skill and practical knowledge of household arts as important by-products of the school activities. They kept also in view as the ultimate aim the development of manhood and womanhood through "the common tasks of the common day." Dr. Jones emphasizes the importance of industrial education for the advancement of the Negro in the following significant words:

"No group of people can obtain a satisfactory position in life until they are able to make a reasonable contribution to the economic welfare of their community. The moral and civic status is closely related to the economic. The Negroes are at present overwhelmingly in unskilled occupations. A larger percentage of their women and children are working outside the home than is the case with any other group in the United States. While the race has made real progress in the acquisition of property since the Civil War, a much larger proportion of Negro breadwinners should be prepared to enter the skilled trades and their economic status should be elevated sufficiently to enable the children to attend school and the women to give more time to the moral and hygienic development of the home. Such a development of the Negroes is not only necessary to the welfare of the race but essential to the progress of every Southern State."

NUMBER OF INSTITUTIONS INVESTIGATED.

In all, Dr. Jones's study covered 747 institutions. These institutions are listed and described in Volume II (Bulletin 39), Volume I being reserved for interpretative views of various phases of Negro education. The public facilities for industrial education of Negroes are practically limited to the 16 agricultural and mechanical schools maintained chiefly by Federal funds. It is Dr. Jones's conviction that while most of these institutions are fairly well

equipped to teach the more important trades and to train classes in household arts, only a few of them teach trades effectively. Practically all of them subordinate the industrial training to the literary instruction. Only three cities—Washington, D. C., Charleston, S. C., and Columbus, Ga.—maintain industrial schools for Negroes. There are 13 States which also provide some instruction in industrial courses.

It is largely because of this meager provision by the public authorities that the private industrial schools have thrived. There are 206 private schools that offer some industrial instruction, but the Jones report considers that in fully half of these schools the industrial training is not only limited in quantity but ineffective in result. The work ranges all the way from a small amount of sewing and cooking to the numerous array of trades effectively taught at Hampton and Tuskegee. One item of promise which makes it likely that the public institutions will soon become worthy rivals of the private industrial schools is the appointment of State supervisors of colored schools in 11 Southern States, and county industrial teachers in 163 counties in the South.

AGRICULTURAL TRAINING.

For a people 73 per cent rural, as Dr. Jones points out, vocational training must be largely agricultural. Forty per cent of all persons engaged in southern agriculture are colored. Important as this type of education is to the Negro and to the South as a whole, the facilities are entirely inadequate. The 16 agricultural and mechanical schools maintained with the help of Federal funds have large farms and considerable equipment, but only a small number of them make adequate educational use of the farms or the equipment. There are 56 private institutions with ample farm land on which instruction in agriculture could be given, but very few of them make effective use of their facilities, Hampton and Tuskeegee being the only ones where the trades courses are comparable to those in the agricultural colleges for white students.

GENERAL PUBLIC SCHOOL FACILITIES.

According to the Jones report, public schools for Negroes have shared comparatively little in the educational advancement of the past 15 years. At the present time, however, the more progressive southern leaders are realizing that the economic, hygienic, and moral welfare of their sections requires at least the elementary education of the Negro, with proper attention to industrial training and the laws of health. As a measure of the comparative status of public

schools for Negroes, a table of teachers' salaries is presented. From this table it appears that in the Northern and Western States the average teachers' salaries paid for each child 6 to 14 years of age range from $15.78 to $36.30 per annum for all pupils, and in the Southern States from $5.27 to $13.79 for white pupils and from $1.44 to $8.53 for colored pupils. Dr. Jones qualifies his statement with the comment that the South has maintained a double system of schools on finances limited both by the poverty due to conditions arising out of the Civil War and by ineffective systems of taxation. He concludes, however, that "the per capita expenditure for Negro schools, by whatever standard measured, is utterly inadequate."

There is considerable misunderstanding as to the extent to which private funds have supplemented public provision. While private funds have been given with great liberality for colored schools in the South, Dr. Jones shows that the pupils in private schools constitute only 4 per cent of the Negro children 6 to 14 years of age, and 7 per cent of the pupils attending elementary schools. Furthermore, he declares, "Under present conditions in the South many of the private schools are compelled to undertake work that is not suited to their facilities. With an adequate public school system, these private institutions could devote their income and equipment much more effectively to the improvement of the Negro race and, therefore, to the assistance of the South."

IMPORTANCE OF THE NEGRO TO SOUTHERN INDUSTRY.

In the summary section on industrial education Dr. Jones analyzes the welfare of the South and the occupational distribution of Negroes. He shows that the South is rich in economic resources, but poor both in the quantity and the quality of its labor supply and that the industrial education of both the white and the colored youth is undoubtedly the most important element in the economic development of the section. In his view the hope of the South for an improved labor supply is not immigration but effective education both of the white and the colored youth. After all the years of tremendous immigration to America the South had, in 1910, only 726,171 persons of foreign birth, or less than 5 per cent of the total number of immigrants. Special importance attaches to this statement from the threatened emigration to the North. Dr. Jones quotes a prominent North Carolinian as follows:

> I believe that the Negro should be educated and that industrial education is what he most needs. But we must not overlook the fact that he has other shortcomings besides that of economic inefficiency. His present condition is not due to a low earning capacity alone, but also to low ideals of living. We

must guard against any kind of one-sided development and bear in mind that the right kind of Negro education is twofold: To increase the Negro's industrial efficiency, and at the same time and with the same speed raise his standard of living. The true type of industrial education not only makes the Negro a better workman, but also causes him to build a better home and live a worthier life.

The report declares industrial education to be of as great importance to the colored people themselves as to the Nation of which they are a part. Notwithstanding the progress that has been made, the Negroes as a race still have a comparatively low economic status. They are as yet "hewers of wood and drawers of water." The only groups forming a substantial proportion of all Negro breadwinners are the laborers, farmers, and laundresses. Other than farmers, no skilled or professional group forms even 1 per cent of the total. It is apparent, therefore, that the possibilities of the race in skilled occupations have only begun. In view of the increased demand of the South for skilled workmen, it is vitally important to the colored people that they grasp every opportunity for industrial education.

College and professional education are also urged by the bureau's report as of real importance to develop trained leaders for the race. Throughout the report the point is made that the object of industrial and other education for the Negro, as for any group, is not merely to make more valuable workmen for industry, but to give men and women the means for upward development. Dr. Jones has carefully pointed out in his section on industrial education that "Great as the economic value of industrial education is, it is by no means equal to the educational value resulting from the interaction of hand and mind in trade activities and from the adaptation of the school curriculum, not only to the economic, but also to the intellectual and spiritual needs of the individual and the community. * * * The broad adaptation to these needs, realized in the effective industrial schools, emphasizes the study of physiology and hygiene, physical science, English, teacher training, sociology, civics, gardening, and other theory and practice required to enable the pupil to be of the greatest service to himself and his neighborhood."

LABOR LAWS.

LABOR PROVISIONS OF THE NEW CONSTITUTION OF THE STATE OF VERA CRUZ.

The new constitution of the State of Vera Cruz-Llave, promulgated on September 16 in Córdoba, the capital, and on October 11 in Vera Cruz, devotes a whole section to the question of labor and the relations of workmen to employers in order to prevent the abuses, especially in the various forms of peonage, which existed in the past. A translation of the section in full follows:

SECTION VII.—*In regard to labor and social welfare (prevision).*

ARTICLE 128. The legislature of the State shall issue laws on the subject of labor, which laws shall be based on the requirements of this locality, without violating the following fundamentals, and shall govern the labor of workmen, day laborers, employees, domestic servants, and artisans, and, in general, every labor contract.

I. The duration of the maximum workday shall be eight hours. The maximum working time for night labor shall be seven hours, and the corresponding wages shall be higher than that for day labor by not less than 50 per cent. For this purpose, day labor is understood to be that carried on between the hours of 6 a. m. and 6 p. m., and night labor that carried on between the hours of 6 p. m. and 6 a. m.

II. Unhealthful and dangerous work is forbidden for women in general and for boys under 16 years. Neither may engage in nightwork in factories, and in commercial establishments neither may work after 10 o'clock at night.

III. The maximum work day of children over 12 and less than 16 shall be six hours. The labor of children less than 12 years old shall not be made the object of a contract.

IV. For every six days of work a workman must have at least one day for rest.

V. During the three months prior to childbirth women shall not be employed at labor requiring considerable physical effort. In the month following childbirth it shall be obligatory for them to rest, and they shall receive for this time their entire salary and retain their right to employment and other rights which they shall have acquired under their contract. During the lactation period they shall have two rest periods each day, of one-half hour each, for nursing their children.

VI. The minimum wage which a workman shall receive shall be one deemed sufficient, in view of the conditions in each locality, to satisfy the normal needs of the life of a laboring man, his education and honest pleasures, considering him as the head of a family. In every agricultural, commercial, manufacturing, or mining enterprise the workmen shall enjoy the right of participation in the profits, which shall be regulated as indicated in Section IX.

VII. For equal work there must be a correspondingly equal wage, without taking into account sex or nationality.

VIII. The minimum wages shall be free from distraint, set-off, or discount.

IX. The fixing of the rate of minimum wages and of a participation in the profits to which Section VI refers shall be made by special committees which shall be formed in each municipality and be subordinate to the central board of conciliation which shall be established in the State.

X. The wages must be paid in money that is legally current, and no payment of wages shall be made in merchandise, promissory notes, tokens, or any other substitute for money.

XI. When, under extraordinary circumstances, the hours of a workday must be increased, 100 per cent shall be paid in addition to the wages fixed for normal hours. In no case shall the extraordinary work exceed three hours a day or occur on more than three successive days.

Boys under 16 and women of any age shall not be allowed to do this kind of work.

XII. In every agricultural, manufacturing, or mining business or any other kind of work the employer shall be obliged to furnish the workmen comfortable and hygienic living quarters, for which the rental shall not exceed one-half per cent monthly of the assessed value of the properties.

Schools, infirmaries, and other services necessary to the community shall also be established. If the businesses are located in towns and over 100 workmen are therein employed, the first of these provisions shall be obligatory.

XIII. In addition, in such centers of labor, when the population exceeds 200 inhabitants, a plot of ground of not less than 5,000 square meters shall be reserved for the establishment of public markets, the installation of buildings destined for municipal purposes, and for recreative centers. In every center of labor the establishment of places for the sale of intoxicating liquors and of gambling houses is prohibited.

XIV. The employers shall be responsible for industrial accidents and for occupational diseases of the workmen, suffered because of, or in the exercise of, the work in which they are engaged; in this connection the employers must pay proper indemnity, depending on whether death has resulted or simply temporary or permanent incapacity for work, in accordance with the provisions of the laws. This responsibility shall exist even in case the employer has contracted for the work through a third person.

XV. The employer shall be obliged to observe in the arrangement of his establishment the legal provisions in regard to hygiene and health and to adopt adequate measures to prevent accidents in the use of machines, tools, and working materials, as well as to organize the work in such a way that there may be the greatest guaranty for the health and life of the workmen that may be compatible with the nature of the business, under the penalties which the laws may provide for this purpose.

XVI. The workmen as well as the employers shall have the right to unite in defense of their respective interests by forming syndicates, occupational associations, etc.

XVII. The laws shall recognize strikes and lockouts as a right of the workmen and employers.

XVIII. Strikes shall be lawful when they have as their purpose the securing of an equilibrium between the different factors of production, harmonizing the rights of labor with those of capital. In public employments it shall be obligatory upon the workmen to give notice to the board of conciliation and

arbitration of the state 10 days in advance as to the day fixed for suspending work. Strikes shall be considered as unlawful only when the majority of the strikers perform acts of violence against persons or property, or, in case of war, when they belong to establishments and services which depend on the Government. The workmen in military manufacturing establishments of the Government of the Republic shall not be included in the provisions of this section because they are considered as belonging to the National Army.

XIX. Lockouts shall be lawful only when the excess of production shall make it necessary to suspend work in order to maintain prices within a limit of the cost, previous approval being secured from the board of conciliation and arbitration of the state.

XX. The differences or conflicts between capital and labor shall be submitted to the decision of a board of conciliation and arbitration formed by an equal number of representatives of the laborers and employers with one representative of the Government.

XXI. If an employer shall refuse to submit his differences to arbitration or accept the finding declared by the board, the labor contract shall be considered at an end and he shall be obliged to indemnify the workmen by the payment of the amount of three months' wages in addition to whatever liability may be incurred by him as a result of the conflict. If on the contrary this should be true in the case of the workmen, the labor contract shall be considered at an end.

XXII. An employer who discharges a laborer without good cause, whether for having become a member of an association or syndicate or for having taken part in a lawful strike, shall be compelled, at the election of the workman, to fulfill the terms of the contract or to indemnify him with the amount of three months' wages. Likewise he shall incur this obligation when the workman shall give up his work, due to unfair dealing on the part of the employer or due to the workman's receiving at his employer's hands maltreatment, either of his own person or of that of his wife, parents, children, brothers, or sisters. The employer can not avoid this liability when the ill treatment has been administered by employees or agents who work with his consent or tolerance.

XXIII. Credits in favor of workmen for salary or wages earned during the preceding year and for indemnities shall have preference over any other in case the business goes into the hands of creditors or goes bankrupt.

XXIV. In cases of debts contracted by workmen on account of their employers, their associates, agents, or employees the workman himself shall alone be liable, and in no case and for no reason can the debt be exacted from members of his family, nor shall said debts be collected to an amount in excess of the wages of the workman for one month.

XXV. The service of finding employment for laborers shall be free to them, whether effected by municipal offices, labor exchanges, or any other official or private institution.

XXVI. Every labor contract entered into by a Mexican and a foreign employer must be legalized by the proper municipal authority and viséed by the consul of the nation to which the laborer is to go, with the understanding that in addition to the ordinary clauses it shall be clearly specified that the expenses of repatriation remain a charge on the employer making the contract.

XXVII. The following conditions shall be null and void and shall not obligate the contracting parties even if expressed in the contract:

(*a*) Those which stipulate a workday that is notoriously excessive when the nature of the work is taken into consideration.

(*b*) Those which fix a salary which is not remunerative in the judgment of the boards of conciliation and arbitration of the State.

(*c*) Those which stipulate a period longer than one week for the payment of day wages.

(*d*) Those which designate a place of recreation, a restaurant, café, tavern, saloon, or shop for paying wages except in the case of employees of such establishments.

(*e*) Those which embody a direct or indirect obligation to purchase articles of consumption in determined shops or places.

(*f*) Those which permit the retention of any part of the wages as a fine.

(*g*) Those which constitute a waiver on the part of the workman of the indemnities to which he is entitled because of industrial accidents or occupational diseases, damages for nonfulfillment of a contract, or for a discharge from work.

(*h*) All other stipulations which imply a waiver of some right vested in the workman by labor laws.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, NOVEMBER 16 TO DECEMBER 15, 1917.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between November 16 and December 15, 1917, in 55 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, NOV. 16 TO DEC. 15, 1917.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Atlas and Lakeside foundries, Detroit, Mich.	200	3,500	Commissioner learned this was a matter for Department of Justice.
The Wm. F. Taubel Hosiery Works, Inc., Riverside, N. J.	381	619	Company had secured 230 women to take place of strikers. Most of strikers have obtained work elsewhere.
Controversy, Consolidated Coal Co., Frostburg, Md.	90	275	Adjusted.
Controversy, machinists, Plainfield, N. J.	2,000	.....	Management of company does not anticipate trouble unless brought about by business agents.
Strike, sizers and formers, John B. Stetson Co., Philadelphia, Pa.	1,235	.....	Pending.
Strike, Morse Twist Drill Co., New Bedford, Mass.	920	1,360	Do.
Strike, Bear Creek Lumber Co., Leakesville, La.	250	.....	Adjusted.
Lockout, carpenters, Naul Construction Co., Wilmington, N. C.	49	.....	Do.
Controversy, Machinery Belt Workers, N. Y.	273	50	Do.
Threatened strike, Eckhart Mines, Frostburg, Md.	90	.....	Pending.
Strike, railway clerks, Denver & Ft. Worth R. R. Co., Ft. Worth, Tex.	73	176	Adjusted.
Strike, machinists, American Woodworking Machinery Co., Aurora, Ill.	135	160	Pending.
Threatened strike, Emmonds Coal Co., Bayard, W. Va.	175	.....	Do.
Controversy, firemen, Passaic and Garfield, N. J.	400	13,000	Do.
Strike, clerks and freight handlers, 9 railroads and 5 steamship lines entering Norfolk, Va.	2,790	3,500	Do.
Controversy, Cincinnati, Indianapolis & Western R. R. Co. and its carmen, Indianapolis, Ind.	150	200	Adjusted.

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, NOV. 16 TO DEC. 15, 1917—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Lawrence Silk Mills, Paterson, N. J.			Adjusted.
Strike, bayonet straighteners, Remington Arms Co., Bridgeport, Conn.	52		Do.
Strike, Lake Torpedo Boat Co., Bridgeport, Conn.			Pending.
Threatened strike, Locomobile Auto Co., Bridgeport, Conn.	1,500	500	Adjusted.
Strike, Boilermakers, William Greaver Tank Works and Sinclair Oil Refining Co., East Chicago, Ind.	65		Pending.
Strike, piano and organ makers, Lyon & Healy Co., Chicago, Ill.	370	50	Do.
Controversy, The Heinn Co. and its bookbinders, Milwaukee, Wis.	73	100	Adjusted.
Controversy, Missouri Zinc Co. and its smeltermen, Beckmeyer, Ill.	55	100	Do.
Strike, street car employees, St. Paul and Minneapolis, Minn.			Pending.
Strike, jewelry workers, Chicago, Ill.			Do.
Controversy, Plumbers and steam fitters, Curtiss Aeroplane Co., Buffalo, N. Y.	1		Adjusted.
Controversy, Todd Protectograph Co., Rochester, N. Y.	4		When commissioner arrived company had places of men filled, and refused to give them work until there was a vacancy.
Controversy, Utah Light & Power Co., Salt Lake, Utah.			Pending.
Controversy, mine, mill, and smelter workers, Herculaneum, Mo.	885	100	Do.
Strike, operators and cementers, Newark Rubber Co., Newark, N. J.	100	40	Adjusted.
Controversy, machinists, Swift Packing Co., East St. Louis, Ill.			Pending.
Strike, Sinclair Oil Refining Co., Coffeyville, Kans.	206	500	Adjusted.
Threatened strike, packing industries, Chicago and entire West.	30,000	100,000	Pending.
Strike, shell shop employees, Pollack Steel Co., Cincinnati, Ohio	75		Do.
Controversy, blacksmiths, Rock Island Arsenal, Chicago, Ill.			Do.
Controversy, Sunnyside Electric Co. and its electrical workers, near Wheeling, W. Va.	25	200	Adjusted.
Controversy, Michigan Central R. R. Co., and its machinists, boilermakers, and blacksmiths, Detroit, Mich.			Pending.
Strike, street railway employees, Charleston, W. Va.	57	17	Do.
Controversy, Baltimore & Ohio R. R. Co. and its clerks, Akron, Ohio.	34	(1)	Adjusted.
Controversy, United Press and its telegraphers, New York.	150		Do.
Controversy, A. G. Cuthbert Co., Chicago, Ill.			Pending.
Threatened strike, electrotypers, Boston, Mass.			Do.
Controversy, Coal & Coke R. R. Co., Gassaway, W. Va.	185		Adjusted.
Controversy, Chicago, Rock Island & Pacific R. R. Co. and United Brotherhood of Carpenters and Joiners, Rock Island, Ill.			Pending.
Strike, shirt manufacturing industry, Mahoney City, Pa.			Do.
Controversy, Brotherhood of Railway Carmen and Southern Pacific R. R. Co., Los Angeles, Cal.			Do.
Controversy, Tintic mine owners and employees, Eureka, Utah.	1,500		Do.
Controversy, Chicago & Great Western R. R. Co. and its shop crafts, Oelwein, Iowa.			Do.
Contract for electrical work, building leased by Government, St. Louis, Mo.			Do.
Controversy, Crucible Steel Co. and Northern Iron Co., Port Henry and Standish, N. Y.			Do.
Controversy, International Arms & Fuse Co., Bloomfield, N. J.			Do.
Controversy, Hercules Powder Co. and metal trades-unions, Chula Vista, Cal.			Do.
Strike, J. Ring and Sons, Philadelphia, Pa.			Do.
Controversy, meat cutters, Kansas City, Mo.			Do.

[1] All clerks on system.

Cases noted as pending in statement of November 15 have been disposed of as follows:

Strike, clerks, Atlantic Coast Line Railroad Co. Adjusted.

Strike, American-British Mfg. Co., Providence, R. I. Adjusted.

Controversy, Pacific States Telephone & Telegraph Co. and its electrical workers, involving California, Washington, Oregon, Idaho, and Nevada. Adjusted.

Controversy, Pacific Steamship Co. and International Longshoremen's Union, San Diego, Cal. Adjusted.

Threatened strike, blacksmiths, Texas Shipbuilding Co., Bath, Me. Adjusted.

Threatened strike, blacksmiths, Bath Iron Works, Bath, Me. Adjusted.

Controversy, Port Newark Terminal, Newark, N. J. Strike order rescinded; men returned to work pending investigation and adjustment.

Controversy, longshoremen and employing stevedores, San Pedro, Cal. Adjusted.

Controversy, oil and gas well workers and oil operators, California. Adjusted.

Lockout, Seaton Garment Co., Princeton, Ind. Plant removed to Olney, Ill., prior to commissioners' arrival.

Threatened strike, machinists, Cleveland, Cincinnati, Chicago & St. Louis R. R. Co. (Big Four), Indianapolis, Ind. Adjusted.

Controversy, mechanical crafts, Toledo & Cincinnati division, Baltimore & Ohio R. R. Co. Adjusted.

Controversy, Kelly-Springfield Tire Co., Akron, Ohio. Adjusted.

Walkout, ship carpenters, McBride & Law shipyards and Beaumont Shipbuilding Dry Docks Co., Beaumont, Tex. Men returned to work pending decision from Washington regarding universal wage scale of 62½ cents per hour.

Strike, machinists, Burns Bros.' Garage, N. Y. Burns Bros., who are in the coal business, use automobiles for making deliveries. They maintained a shop where their automobiles were repaired and in which only seven men were employed. When the men quit they closed the shop and are now having their work done by the manufacturer from whom they buy.

Strike, Nestor Manufacturing Co., New York. Unable to adjust.

REPORT OF THE UNITED STATES BOARD OF MEDIATION AND CONCILIATION.

The act creating the United States Board of Mediation and Conciliation was approved July 15, 1913. The board is concerned in the settlement of labor disputes arising in transportation; it takes jurisdiction over conductors, engineers, and trainmen. The board is not required to make reports of its activities, "but in view of the extreme gravity of the railroad situation, and because the relation of the railroads and their employees is a prime factor in that situation," the board has deemed it advisable to issue a report of its operations.

During the four and a half years of its existence the board has given its services in 71 controversies. Of these, 52 were completely settled by mediation, 6 partly by mediation and partly by arbitra-

tion, 8 wholly by arbitration, 3 by parties themselves, and one by congressional action, while only one remains unsettled.

Since June 30, 1917, there have been 13 additional controversies before the board, of which 5 have been fully settled by mediation, 1 by mediation and arbitration, 3 are under arbitration at present, and 4 are in various stages of mediation.

"In no instance has a strike followed the intervention of the board," it is noted, although any one of the disputes handled by the board was sufficiently serious to threaten the interruption of service on the roads involved. The experience of the board is highly favorable to the method of mediation as a means of settling labor disputes. "It seems to be the best plan yet devised for bringing to a peaceful settlement the disputes which most frequently occur." Settlements by mediation, it is added, "are much more satisfactory to the parties than any form of mediation," because they are secured by the common consent and to the mutual satisfaction of the parties. "There is no decision against either party, and neither of them suffers defeat."

AWARD OF BOARD OF ARBITRATION IN NEW YORK HARBOR WAGE ADJUSTMENT.

The following award was made under date of November 16, 1917, by the Board of Arbitration, New York Harbor Wage Adjustment, United States Shipping Board, in regard to wages and working conditions of employees engaged in the operation of tugs, barges, lighters, ferryboats, and other harbor marine equipment in the port of New York, also river vessels engaged in carrying on the commerce of the port of New York.

Whereas on October 20, 1917, representatives of owners and operators of tugs, barges, lighters, ferryboats and other harbor marine equipment in the port of New York did sign an agreement with the United States Shipping Board as follows:

"We, the undersigned owners and operators of tugs, barges, lighters, ferryboats and other harbor marine equipment in the port of New York, hereby agree with the United States Shipping Board that, during the period of war, we will submit all differences concerning wages or conditions of labor involved in the operation of such marine equipment which can not first be adjusted by the employers and the employees to the decision of a Government board of three men, to be appointed as follows: One by the United States Shipping Board, one by the Department of Commerce, and one by the Department of Labor.

"This Government board shall have no authority to pass upon the question of open or closed shop, or the recognition of unions, but we agree that there shall be no discrimination of any kind against union men, and the board shall have power to determine questions of discrimination."

And whereas representatives of labor employed in the operation of tugs, barges, lighters, ferryboats, and other harbor marine equipment in the port of New York, did on the same day enter into an agreement with the Shipping Board as follows:

"We, the undersigned representatives of labor employed in the operation of tugs, barges, lighters, ferryboats, and other harbor marine equipment in the port of New York, hereby agree with the United States Shipping Board that during the period of the war, we will submit all differences concerning wages or conditions of labor involved in the operation of such marine equipment, which can not first be adjusted by the employers and the employees, to the decision of a Government board of three men, to be appointed as follows: One by the United States Shipping Board, one by the Department of Commerce, and one by the Department of Labor.

"This Government board shall have no authority to pass upon the question of open or closed shop or the recognition of unions, but there shall be no discrimination of any kind against union men, and the board shall have power to determine questions of discrimination; and pending the decision of said board work shall continue uninterruptedly."

And whereas under the agreements above cited a board of arbitration, New York Harbor Wage Adjustment, United States Shipping Board, was appointed as contemplated in the above agreements, to wit: Capt. William B. Baker, of the United States Army, was appointed by the Shipping Board; Ethelbert Stewart by the Department of Labor, and George R. Putnam by the Department of Commerce, and this board having elected Capt. William B. Baker as its chairman and having considered all material evidence in the case, hereby announce to all parties concerned, as its award, the following:

I.—HARBOR AND RIVER TUGS AND PASSENGER VESSELS PROPELLED BY STEAM, OTHER THAN THOSE HEREINAFTER DESIGNATED AS FERRYBOATS, LIGHTERS, AND TIDEWATER BOATS.

(*a*) Minimum Wage Scale.

Deck department.

Captains: The minimum rates of pay of captains shall be based upon the equivalent single cylinder diameter of the engine with which boat is equipped, as follows:

	Per month and board.
10 inches up to and including 15 inches	$125.00
Over 15 inches and including 18 inches	135.00
20 inches and over	145.00
Licensed mates or pilots required to navigate the boat	125.00
Licensed mates on tugs doing transport work	100.00
Licensed deck mates on passenger and excursion vessels, not engaged in the handling or navigation of boat	90.00
First deck hands, two crew boats	65.00
Deck hands, other than first, two crew boats	60.00
Deck hands, when there is but one such employee during period of 24 hours	65.00

	Per month and board.
Engine department.	
Engineers: Rates graduated on same basis as for captain, as follows:	
10 inches up to and including 15 inches	$115.00
Over 15 inches and including 18 inches	125.00
20 inches and over	135.00
Assistant engineer: $10 less per month than engineer on same class of boats.	
Night engineer: When in charge and doing the same class of work as is required of day man, the pay shall be the same as the day engineer.	
Oilers	65.00
Firemen, where two or more are employed	60.00
Firemen, where there is but one such employee during period of 24 hours	65.00
Other employees.	
Cooks on craft employing more than one deck hand in 24 hours	$60 per month and board.
Cooks on craft employing but one deck hand in 24 hours	62 per month and board.
Float men	60 per month and board.

(*b*) WORKING CONDITIONS.

1. Where maintenance or subsistence is not furnished the above employees, 60 cents per day or $18 per month shall be allowed in lieu thereof.

2. The length of day is to be governed by the Federal law.

3. One day off each week with pay shall be granted to all employees, the day to be determined by the employer.

4. One full week's vacation with pay shall be granted to each of the above employees who has been in the employ of one company for a period of one year or more.

5. Car fare to be paid by employers when boats are to change crews at other than a designated point.

6. Employers and employees are urged to reduce overtime to a minimum, but when overtime is required such overtime shall be paid for at time and one-half.

II.—FERRYBOATS.

(*a*) MINIMUM WAGE SCALE, ALL WITHOUT BOARD.

	Per month.
Deck department.	
Captains or pilots	$160
Wheelsmen	80
Deck hands	70
Engine department.	
Engineers	150
Oilers, required to have U. S. marine engineers' license	85
Oilers, not required to have U. S. marine engineers' license	80
Firemen	80

(*b*) WORKING CONDITIONS.

1. One day off each week with pay shall be granted to all the above-named employees, the day to be determined by the employer.

2. One full week's vacation with pay shall be granted to each of the above-named employees who has been in the employ of the company for a period of one year or more.

III.—TIDEWATER BOATS, THAT IS, COAL BOATS, GRAIN BOATS, OR OPEN-DECK SCOWS.

There is hereby established a minimum monthly rate of $70 without board for captains.

IV.—LIGHTERS AND BARGES NOT INCLUDED UNDER III.

There is hereby established the following minimum monthly rates for captains:

(a) For barges having heavy steam hoisting gear of 15 tons capacity and over	$90.00
(b) For barges having light steam or gasoline hoisting gear of less than 15 tons capacity	85.00
(c) For covered barges and barges with hand hoisting gear	77.00

For watching at night, if required, $1 per night shall be paid for covered barges, loaded barges where man is not required to be on deck and unloaded barges, and $1.50 per night per man where man is required to be on deck.

All car fares in excess of 10 cents to be paid by the employers for men within the metropolitan district, and all car fares to be paid by employers when on company business.

Nothing in this award shall be construed to decrease the pay or allowance, or to increase the hours of labor now in effect, or that were in effect on or prior to November 1, 1917.

All wage rates, allowances, and working conditions provided for in this award shall be effective as of November 1, 1917.

(Signed) W. B. BAKER, *Captain, U. S. A.,*
Chairman, representing U. S. Shipping Board.

(Signed) G. R. PUTNAM,
Department of Commerce.

(Signed) ETHELBERT STEWART,
Department of Labor.

STRIKES AND LOCKOUTS.

STRIKES AND LOCKOUTS IN GERMANY, 1916.[1]

The August issue of the journal of the German Department of Labor Statistics (*Reichs-Arbeitsblatt*) gives a summary of the figures relating to labor disputes in 1916. These numbered 240 (all of which were strikes) and involved 124,188 workpeople. As will appear from the following table the labor disputes of 1916 show a considerable advance on 1915, both as regards the number of persons involved and the number of days lost; on the other hand, the days lost in 1916, both actually and in relation to the number of disputes, were much fewer than the average for the five years immediately preceding the outbreak of the war.

Year.	Number of disputes.	Number of workpeople directly involved.	Number of working days lost.
1909–1913 [1]	2,595	327,593	11,190,494
1914	26	95,140	2,843,895
1915	141	12,866	45,511
1916	240	124,188	245,404

1 Average.

The groups of trades affected most seriously by the 1916 disputes, taking the estimated number of days lost as the criterion, were mining (100,121 days lost), metal (37,900), and engineering (5,307). In these three groups together the aggregate loss in working days amounted to 58 per cent of the total lost in all trades combined. From the point of view of the workpeople 27 (or 11.3 per cent) of the disputes were fully successful, 130 (54.2 per cent) partly so, and 83 (34.5 per cent) wholly unsuccessful.

In a notice of the report referred to above the Berlin journal Soziale Praxis of 23d of August makes the suggestion that the value of the statistics issued by the Imperial Statistical Office would be enhanced if they were secured through the cooperation of the trade-unions rather than (as now) through returns collected by the police authorities.

[1] The Labour Gazette, London, November, 1917, p. 403.

IMMIGRATION.

IMMIGRATION IN SEPTEMBER, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During the current year the figures for the first three months show a considerable decrease from month to month. The decrease from the preceding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures for May show a decrease of 48.9 per cent. The figures for June indicate an increase of 5.5 per cent over those for May. During July immigration reached a very low point, only 9,367 immigrant aliens having been admitted, a total even smaller than that for May, which was the smallest total for any month in many years. As compared with figures for July, however, those for August show an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August the figures for September show a decrease of 8.2 per cent. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	[1] 19.9
February	59,156	46,873	13,873	24,740	19,238	[1] 22.3
March	96,958	92,621	19,263	27,586	15,512	[1] 19.4
April	136,371	119,885	24,532	30,560	20,523	32.3
May	137,262	107,796	26,069	31,021	10,487	[1] 48.9
June	176,261	71,728	22,598	30,764	11,095	5.5
July	138,244	60,377	21,504	25,035	9,367	[1] 15.6
August	126,180	37,706	21,949	29,975	10,047	7.3
September	136,247	29,143	24,513	36,398	9,228	[1] 8.2
October	134,440	30,416	25,450	37,056	.....	.....
November	104,671	26,298	24,545	34,437	.....	.....
December	95,387	20,944	18,901	30,902	.....	.....

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during September, 1916 and 1917, was as follows:

IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, SEPTEMBER, 1916 AND 1917.

Race.	Admitted.		Departed.	
	September, 1916.	September, 1917.	September, 1916.	September, 1917.
African (black)	606	669	109	74
Armenian	202	21	39	290
Bohemian and Moravian	25	20	2	4
Bulgarian, Servian, Montenegrin	110	10	10	43
Chinese	145	231	192	142
Croatian and Slovenian	39	4	.....	19
Cuban	488	322	144	94
Dalmatian, Bosnian, Herzegovinian	8	1	.....	4
Dutch and Flemish	741	127	96	48
East Indian	13	9	2	1
English	3,042	1,364	607	1,201
Finnish	452	193	47	66
French	1,874	605	256	520
German	912	160	53	71
Greek	4,767	134	599	558
Hebrew	1,344	269	37	32
Irish	1,502	466	218	278
Italian (north)	297	50	849	140
Italian (south)	3,964	71	1,732	1,564
Japanese	366	834	44	132
Korean	2	12	.....	2
Lithuanian	38	12	2	.....
Magyar	47	5	9	.....
Mexican	2,222	196	58	69
Pacific islander	.....	1	.....	.....
Polish	445	28	32	44
Portuguese	1,084	83	129	41
Roumanian	66	13	8	7
Russian	315	127	576	462
Ruthenian (Russniak)	197	6	1	.....
Scandinavian	2,058	1,525	381	303
Scotch	1,176	579	95	328
Slovak	13	4	5	.....
Spanish	765	626	201	447
Spanish-American	208	299	53	70
Syrian	105	20	12	14
Turkish	39	1	2	6
Welsh	66	14	20	21
West Indian (except Cuban)	94	93	37	31
Other peoples	138	24	127	101
Not specified	.....	.....	902	.....
Total	29,975	9,228	7,686	7,227

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

MARYLAND.—[*State Industrial Accident Commission*]. *Reports of cases under the Workmen's Compensation Act, decided by the State Industrial Accident Commission and the court of appeals of Maryland, from November 1, 1914, to September 1, 1916, inclusive. Vol. 1. Edited and reported by J. Lloyd Harshman, legal director to the claim bureau. Baltimore.* [*1917.*] *316 pp.*

MASSACHUSETTS.—*Bureau of Statistics. Seventh annual report on union scale of wages and hours of labor in Massachusetts, 1916. Labor bulletin No. 120. Boston, 1917. 136 pp.*

This is the seventh of a series of annual reports issued by the Bureau of Statistics relative to the time rates of wages (i. e., wages agreed upon in return for services for a specified period) and hours of labor in the organized industries and trades of Massachusetts, the data being obtained principally as of October 1, 1916. Authority for the data presented was derived in most cases from information furnished by organizations of employees, the exceptions being in steam and electric railway service, and in telephone, telegraph, and Federal service, where the information was furnished by the employers. The report states that of the 1,427 local unions known to be in existence on October 1, 1916, 943, or 66.1 per cent, are represented in the returns. The aggregate membership of these 943 local unions was 152,988, or 58.2 per cent of the aggregate membership of the 1,427 local unions in the State on that date. It is estimated that at least 50 per cent of the aggregate number of trade-union members in the State were working on a standard time-rate basis, and that the total membership of local unions whose members were reported as working either on a time-rate basis or a piece-price basis was approximately 85.1 per cent of the aggregate membership of all local unions in the State. The report is almost entirely statistical.

PENNSYLVANIA.—*Annual report of the State Workmen's Insurance Fund. Harrisburg* [*1917*]. *29 pp.*

This report is noted on pages 162 to 164 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Board of Mediation and Conciliation. Report of December 8, 1917. Washington, 1917. 3 typewritten pages.*

This report is noted on pages 229 and 230 of this issue of the MONTHLY REVIEW.

——*Department of Labor. Fifth annual report of the Secretary of Labor. Fiscal year ended June 30, 1917. Washington, 1917. 159 pp.*

This report is noted on pages 40 to 47 in this issue of the MONTHLY REVIEW.

————*Children's Bureau. Governmental provisions in the United States and foreign countries for members of the military forces and their dependents. Prepared under the direction of Capt. S. Herbert Wolfe, Q. M., U. S. R. Bureau publication 28. Washington, 1917. 237 pp.*

For a review of this report see pages 159 to 162 in this number of the MONTHLY REVIEW.

——*Employees' Compensation Commission. First annual report, September 7, 1916, to June 30, 1917. Washington, 1917. 49 pp.*

This report is noted on pages 156 to 159 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Federal Board for Vocational Education. Annual report, 1917. Washington, 1917. 31 pp.*

This report is noted on pages 217 and 218 of this issue of the MONTHLY REVIEW.

——— *Statement of policies. Bulletin No. 1. Washington, 1917. 70 pp.*

This bulletin presents a summary of the policies, preliminary and tentative, thus far agreed upon by the board for administering the Smith-Hughes Act, which provides a scheme of cooperation between the Federal Government and the States for the promotion of vocational education in the fields of agriculture, trade, home economics, and industry. Part I includes general policies or standards adopted by the Federal Board; Part II includes principally rulings upon and a discussion of points raised at the hearings given to the State boards for vocational education held in Washington in August. This discussion falls under four general subheads: Considerations of a general nature, agricultural education, industrial and trade education, and home-economics education. In addition to the policies the bulletin contains in the appendix an analysis of what may be termed the absolute legal requirements of the Smith-Hughes Act. The appendix also contains a copy of the act of February 23, 1917 (Public No. 347, 64th Cong.), and statistical tables showing amount of grants to the States which will be available if the States comply with the requirements of the act.

——— *Shipping Board. First annual report, Dec. 1, 1917. Washington, 1917. 36 pp.*

Bearing somewhat upon the subject of vocational education is that portion of the report relating to the recruiting and training of officers and engineers and crews for the greatly enlarged merchant marine in prospect. The first work taken up was the training of deck officers, men already trained by experience in seamanship being taken and given a short intensive period of training in special navigation schools under the direction of the recruiting service. In five months no less than 15,000 men have applied for such training. Twenty-seven navigation schools have been established, the teaching staff including sea captains as well as teachers from scientific schools and technical universities. For admission to the schools a minimum of two years' experience at sea is required, and during the schooling they receive no compensation from the Government and no allowance for expenses. The next work to be given attention has been the training of engineers. During the period from June 1 to October 31 there were graduated from the navigation schools 604 men and from the engineering schools 416 men.

OFFICIAL—FOREIGN COUNTRIES.

ARGENTINA.—*Boletin del Departamento Nacional del Trabajo. No. 34. May, 1916. 235 pp.*

A continuation of an investigation of the economic condition of Indians living in the Federal territories of Chaco and Formosa. The report deals with the efforts of the State and of early missionaries among the aborigines along the line of education and instruction in useful labor; family relations; State regulations in force in Indian stations; agricultural labor; religion and superstition, etc., of the various tribes; expenses and income of stations, and recommendations made by the investigator.

AUSTRALIA.—*Official Statistics, Commonwealth of Australia. Production Bulletin No. 10. Summary of Commonwealth production statistics for the years 1905–1906 to 1915–1916. Commonwealth Bureau of Census and Statistics. Melbourne, 1917. 168 pp.*

This is the tenth bulletin relating to production, issued by this bureau. The information given is presented under 11 heads, and a summary. Statistical tables relate to agriculture, mining, and manufacturing.

NUMBER OF FACTORIES AND EMPLOYEES, AMOUNT OF WAGES PAID, VALUE OF RAW MATERIALS USED, VALUE ADDED, AND VALUE OF OUTPUT, IN AUSTRALIA, 1907, 1910, 1913, AND 1915.

	1907	1910	1913	1915
Number of factories [1]	12,555	13,850	15,536	15,092
Average number of hands employed	248,859	286,928	337,101	321,071
Amount of salaries and wages paid	$89,173,634	$116,144,673	$163,544,022	$161,619,648
Value of materials used	$270,022,677	$354,082,944	$469,166,987	$500,159,803
Value added to material	$185,234,334	$234,083,015	$317,068,466	$322,700,622
Value of output	$455,257,011	$588,165,959	$786,235,453	$822,860,426
Average annual earnings:				
Males	(2)	(2)	$600.14	$623.01
Females	(2)	(2)	$232.33	$244.20
All employees	$376.28	$423.68	$506.80	$525.58

[1] Industrial establishments in which at least 4 hands are employed or in which power other than hand is used.
[2] Not separately reported.

The per cent of male employees over female employees was as follows: In 1907, 48.6; in 1910, 46.8; in 1913, 50.8; and in 1915, 50.1.

In 1910, the number of persons under 16 years of age employed in factories formed 4.86 per cent; in 1913, 4.08 per cent; and in 1915, 4.72 per cent of all persons so employed.

AUSTRALIA (NEW SOUTH WALES).—*Department of Labor and Industry. Report on the working of the Factories and Shops Act, 1912, during the year 1916. Sydney, 1917. 62 pp.*

A report on the administration of the Factories and Shops Act for the year ending December 31, 1916, with summaries showing the number of factories registered, persons employed, and horsepower of machinery used in the various districts.

Statistical tables and charts show the number and percentages of employees, classified by sex and age.

CANADA.—*Department of Labor. Labor legislation in Canada for the calendar year 1916. Ottawa, 1917. 102 pp.*

These laws are compiled by provinces and cover the general subjects of labor departments and bureaus; wages; holidays and rest days; regulation and inspection of factories and coal mines; employment of women and children; workmen's compensation; examination and licensing of workmen—apprenticeship; vocational training; mothers' pensions; housing; protection of civil and property rights of persons on active service; loans and financial aid for settlers; and prison labor.

——*Seventh annual report on wholesale prices, 1916. Ottawa, 1917. 295 pp.*

Presents a summary review and analysis of the price changes of the year, followed by the actual statistics of prices, the latter being divided into two parts: (1) The weekly or monthly quotations for each article through 1916; and (2) tables of average annual prices back to 1890 reduced to the form of index numbers. Appendix A gives a summary of average retail prices in over 50 Canadian cities; Appendix B contains a review of the course of prices in 1916 in other countries. The following table of index numbers shows the upward trend of wholesale prices in Canada at certain specified times, 1890 to 1916:

INDEX NUMBERS SHOWING TREND OF WHOLESALE PRICES AT CERTAIN DATES, 1890 TO 1916.

[1890 to 1899=100.]

Date.	Index number.
1890[1]	110.3
1895[1]	95.6
1900[1]	108.2
1905[1]	113.8
1910[2]	124.2
January, 1914[2]	136.5
July, 1914[2]	134.6
1914[2]	136.1
January, 1915[3]	138.9
July, 1915[3]	150.2
1915[3]	148.0
January, 1916[4]	172.1
July, 1916[4]	180.9
1916[4]	182.0

[1] 230 commodities.
[2] 272 commodities.
[3] 271 commodities.
[4] Number of commodities not stated.

The report also includes a table showing the cost per week of a family budget of staple foods, fuel and lighting, and rent, in terms of the average prices in 60 cities in Canada. The following table, adapted from the report, shows this cost for certain periods from 1900 to 1916:

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS, FUEL AND LIGHTING, AND RENT, IN TERMS OF AVERAGE PRICES IN 60 CITIES, FOR EACH SPECIFIED PERIOD.

Year.	Food.	Fuel and lighting.	Rent.	Total.
1900[1]	$5.48	$1.95	$2.37	$9.80
1905[1]	5.96	1.63	2.89	10.48
1910	6.95	1.76	4.05	12.76
1911	7.14	1.78	4.60	13.52
1912	7.34	1.82	4.75	13.91
1913	7.34	1.91	4.83	14.08
July, 1914	7.42	1.89	4.81	14.12
December, 1914	7.95	1.88	4.39	14.22
1914	7.73	1.90	4.75	14.38
July, 1915	7.80	1.84	4.10	13.74
December, 1915	8.13	1.85	3.97	13.95
1915	7.87	1.82	4.12	13.81
July, 1916	8.46	1.90	4.04	14.40
December, 1916	10.11	2.10	4.09	16.30
1916	8.79	1.92	4.04	14.75

[1] December.

CHILE.—*Central Statistics Bureau. Statistical Abstract of the Republic of Chile, 1916. Santiago de Chile, 1917. x, 150 pp.*

This volume contains the usual information found in statistical yearbooks. In 1915 there were, exclusive of minor manufacturing establishments, 2,406 manufacturing establishments reported furnishing employment to 7,371 clerical employees and 45,551 wage earners. Of the wage earners 31,093 were men, 11,025 were women, and 3,433 were children. The most important industry is food preparation, constituting nearly one-half the value of all production.

CUBA.—*Secretaria de Hacienda. Sección de Estadistica. Industria Azucarera y sus Derivadas. Habana, 1917. 106 pp. Charts.*

A compilation of data relative to the sugar production in Cuba in the harvest of 1915–16 and foreign sugar trade in 1916. The number of plantations in

operation and the exportations in 1916 were greater than any year for which comparable figures are given. The amount exported in 1915 and in 1916 was 2,523,597 and 2,890,138 tons, respectively. Of the total of 3,068,437 tons of production, less than 1,000 tons were refined. According to estimates made by the chief of the bureau of statistics the production of 1917 will exceed 3,500,000 tons.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. Statistique Générale de la France. Annuaire Statistique. Trente-quatrième volume, 1914–1915. Paris, 1917. lxi, 494, 239* pp.*

This report contains statistical information on climatology, movement of population, production, income and expenses, administration, and colonial statistics, with comparable data for a series of years.

GREAT BRITAIN.—*Board of Trade. Report upon the accidents that have occurred on the railways of the United Kingdom during the year 1916. London, 1917. 6 pp.*

This report is presented under three general heads: (1) Train accidents; (2) accidents caused by the movement of trains and railway vehicles exclusive of train accidents; and (3) fatal accidents on railway premises not due to train accidents or to the movement of trains and railway vehicles. The following table is a general summary of all accidents:

NUMBER OF PERSONS KILLED OR INJURED ON THE RAILWAYS OF THE UNITED KINGDOM IN 1916, COMPARED WITH 1915, SHOWING PER CENT OF INCREASE OR DECREASE.

Group.	1915 [1]		1916		Per cent of decrease 1916 from 1915.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1. Train accidents:						
Passengers	[2] 269	[2] 1,432	3	350	98.9	75.6
Servants	9	183	12	182	[3] 33.3	.5
Other persons	.....	2	1	17	.....	[3] 750.0
2. Accidents caused by the movement of trains and railway vehicles, exclusive of train accidents:						
Passengers	162	4,355	147	1,195	9.3	[3] 9.3
Servants	403	4,962	[4] 402	[5] 3,519	.2	29.1
Other persons	521	334	427	326	18.0	2.4
3. Accidents on railway premises not due to group 1 or 2:						
Passengers	6	708	9	([6])	[3] 50.0	.....
Servants	59	21,202	[7] 39	([6])	33.9	.....
Other persons	40	562	26	([6])	35.0	.....
Total	1,469	31,740	1,066	5,589	27.4	[8] 39.7

[1] Data taken from the report for 1915, which was noted in the Monthly Review for October, 1916, p. 101.
[2] This figure is large because of 1 accident in which 227 persons were killed and 246 were injured.
[3] Increase.
[4] 6 were servants of contractors and not of railways.
[5] 16 were servants of contractors and not of railways.
[6] Data not given.
[7] 3 were servants of contractors and not of railways.
[8] Based upon the totals of groups 1 and 2 only.

INDIA.—*Department of Mines. Report of the chief inspector for the year ending 31st December, 1916. Calcutta, 1917. 96 pp.*

This report is divided into five sections: (1) Persons employed; (2) Output of minerals; (3) Accidents; (4) Prosecutions and additions to the acts; (5) General remarks. Data in two of these sections are of particular interest to labor, namely, the number of persons employed in the mines, and the number of accidents during the year 1916. There were, according to the report, 197,919 persons working in and about the mines in 1916, 124,770 of these being adult

males, 66,855 being adult females, and 6,294 being children under 12 years of age. This is an increase of 17,831 workers, or 9.9 per cent, over the preceding year. Those employed in coal mines numbered 143,459, a decrease of 2,078 from 1915.

During the year there were 140 accidents causing fatalities, a decrease of 23 as compared with 1915. These accidents involved a loss of 206 lives (168 males and 38 females), which is stated to be the largest since 1913. Most of these deaths (82 per cent) occurred at coal mines. Forty-six persons lost their lives by falls of roof, 35 by falls of side, 29 in shafts, 14 by explosions of fire damp, 12 by haulage, 4 by explosives, 3 by irruption of water, 7 by other accidents underground, and 56 by accidents on the surface. The death rate per 1,000 persons employed was 1.04, while that of the preceding five years was 1.10. At coal mines these figures were 1.18 and 1.24, respectively. The death rate per million tons raised at coal mines was 10.29, while that of the preceding 5 years was 10.87. By way of comparison the report notes that at coal mines in England, during the 10 years ending and including 1914, the death rate per 1,000 persons employed varied from 1.08 to 1.69, while the death rate per million tons raised, in the same period, varied from 4.31 to 6.37. The percentage of increase in the output of the principal minerals, 1916 over 1915, was as follows: Coal, 0.41; manganese, 50.02; mica, 45.36; salt, 10.77; wolfram (a tungstate of iron and manganese), 49.86; limestone, 29.43 (decrease); gold, 4.46 (decrease); copper ore, 66.65 (decrease).

INDIA.—*Department of Statistics. Prices and freights after three years at war. Calcutta, 1917. 7 pp.*

This report shows wholesale and retail prices in Calcutta, index numbers of retail food prices in other countries, and the rise in freights. States that the wholesale prices of commodities in Calcutta at the end of July, 1917, were 42 per cent higher than at the outbreak of the war, and that the general level of retail prices of foodstuffs in Calcutta showed a rise of 16 per cent as compared with the period just before the war began. The increase in retail prices since July, 1915, was 7 per cent and since July, 1916, 5 per cent. The following table shows the unweighted index numbers of the principal food commodities at the end of July, 1917, as compared with July, 1915, and July, 1916, prices at the end of July, 1914, being taken as the base, or 100.

UNWEIGHTED INDEX NUMBERS OF FOOD PRICES AT THE END OF JULY, 1917, AS COMPARED WITH 1915 AND 1916.

[Prices at the end of July, 1914=100.]

Article.	Index number at end of July—		
	1915	1916	1917
Rice	95	103	104
Wheat flour	118	109	117
Pulses	112	118	109
Food grains (cereals and pulses)	108	109	110
Sugar	168	182	181
Tea	105	112	119
Salt	125	162	150
Meat (beef and mutton)	101	101	96
Fowl	104	104	102
Eggs	96	78	89
Fish, fresh	101	95	108
Dairy products	114	122	135
Fruits and vegetables	103	100	112
Mustard oil	74	74	78
General average (unweighted)	108	110	116

RUSSIA.—*Federal Department of the Russian Confederated States. Pensions and aid to soldiers of the ranks and their families. Code of laws and decisions with official explanations up to November 1, 1915, and interpretation edited by the Judicial Commission of the Several Russian United Towns. Moscow, 1916. xxvi, 309 pp.*

—— *Izdanie Sostoyashchago pod Avgusteishim cya Imperatorskago Velichestva Gosudaryni Imperatritsy Alexandry Teodorovny Predsedatelstvom Verkhornago Sovcta po Prizreniyu Semei lits Prezvanni na Voinu, a takzhe Semei Raneny e Pavshikh Voinov. Code of laws, decisions, etc., relative to assistance to soldiers of the ranks and their families, up to January 1, 1916. Collected by the Chancellor's Office of the Supreme Council, and published by the Imperial Printing Office, Petrograd, 1916. li, 873 pp.*

SWITZERLAND.—*Bureau des Assurances. Rapport sur les Entreprises Privées en Matière d'Assurances en Suisse en 1915. Berne, 1917. 116*, 201 pp.*

This volume contains reports of the operations of the various insurance associations operating under Government concession, and subject to supervision.

Twenty societies are engaged in accident insurance proper, while 6 others operating as insurance companies in Switzerland do no industrial insurance business, having concessions for other lines of risks only. There are in addition, a large number of cooperative associations and societies engaged in accident insurance which are not subject to the supervision of the Federal Government.

The premiums collected by 25 of the companies mentioned above amounted to 130,683,212 francs ($25,221,860). The amount disbursed for accident compensation and annuities, including unpaid claims due and premiums returnable, was 78,782,946 francs ($15,205,109); general expenses amounted to 43,517,090 francs ($8,398,798); reserve to 86,214,718 francs ($16,639,441).

Of the 25 for which reports are complete relative to profit and loss, 20 were operated at a profit of 14,542,511 francs ($2,806,705) and 5 at a loss of 1,338,420 francs ($258,315).

—— *Département de l'économie publique. Rapports des gouvernements cantonaux sur l'exécution de la loi fédérale concernant le travail dans les fabriques 1915 et 1916. Aarau, 1917. 122 pp.*

In this volume factory statistics for the various provinces are reported, including dispensations granted relative to overtime and holiday work, nature and duration of industrial accidents, and their compensation, number of infractions of the labor laws, and number of industrial establishments in operation.

UNION OF SOUTH AFRICA.—*Department of Mines and Industries. Annual report of the Government mine engineer for the calendar year ended 31st December, 1916. Pretoria, 1917. 108 pp. 30 tables.*

States that the value of minerals produced during the year 1916 was £50,593,359 ($246,212,581.57), or an increase of 16.22 per cent over 1915, the largest increase being in the value of diamonds mined, namely, 1,332.8 per cent. The numbers of persons in the service of mines and works during December, 1916, were 32,000 whites, 4,190 Asiatics, and 280,515 natives and other colored persons, the total being an increase of 5.78 per cent over 1915. The earnings of those employed in mines and works were as follows: Whites, £9,657,060 ($46,996,082.49); Asiatics, £134,145 ($652,816.64); natives and other colored persons, £7,714,456 ($37,542,400.12); the total being £17,505,661 ($85,191,299.25), or an increase of 10.24 per cent over 1915. There were 2,942 accidents during the year, 808 being fatal and 2,134 nonfatal. The average number employed during 1916 was 289,629, making the death rate 2.79 per 1,000 employed, as compared with 2.93 in 1915. The death rate was lowest in the diamond mines, being 0.67, and highest in the metalliferous mines, being 2.99. The death rate

in coal mines was 2.05. The compensation paid by or on behalf of mines in respect of 674 death claims was £45,275 ($220,330.79); 3,575 injury claims, £78,682 ($382,905.95); the total, £123,957 ($603,236.74), being an increase of 5.18 per cent over the amount paid in 1915. The average paid per claim was $326.90 for death, and $107.11 for injury.

UNOFFICIAL.

AMAR, JULES. *Le moteur humain et les bases scientifiques du travail professionnel. Paris, H. Dunod et E. Pinat, 1914. 622 pp. Illustrated.*

This volume, by the director of the research laboratory for vocational work at the National Conservatory of Arts and Trades, and doctor of sciences, is an endeavor to bring together the elements of physical and physiological research in their relation to vocational work in a text which is sufficiently technical to be a complete exposition of the subject and sufficiently concise to appeal to the general reader. It covers briefly the results of studies which have been made upon the subject of the mechanical and physiological conditions of human labor, from the work of Coulomb in 1785, including the work of Chauveau and Taylor, up to the recent developments in the methods of measuring muscular work and fatigue. The volume is divided into six books under the heads of: Ideas of general mechanics; the human machine; human energy; the man and his medium; experimental technique; and vocational work. The subject is developed from a survey of the laws of mechanics applied to the human body and their relation to physical constitution and environment, waste and repair, fatigue and rest, to a discussion of the technique of experimentation and the instruments used for measuring the dynamic power of the human machine and evaluating its energy, and finally to the test of such experimental work applied to vocational labor. The relation between labor and wages, which is naturally raised by a discussion of increasing the output of the workman, is touched upon only incidentally, the author stating that it is outside the range of the present volume. The work contains a preface by Henry le Chatelier, member of the Institute, general inspector of mines, and professor at the Sorbonne and at the high school of mines, and is honored by a subscription from the ministers of labor and of commerce.

—— *Organisation physiologique du travail. Paris, H. Dunod et E. Pinat, 1917. 374 pp. Illustrated.*

The reeducation of the wounded, although not suggested by the title, is the objective of this work by Prof. Amar. The first two-thirds of the book, with a preface by Henry le Chatelier, reviews the history, methods, and results of such experiments in the scientific study of human labor as seem to have practical bearing upon this reeducation, under the heads of: Human work, history and doctrines; organic functions of man; human psychophysiology; work and fatigue; the factor of work; the art of working, physical activity, intellectual activity; apprenticeship; and manual labor.

The remaining third of the book has been expanded from an address on "La prothèse et le travail des mutilés," delivered by Prof. Amar before the Conference on Work for the Wounded, January 12, 1916. It is devoted to a study of the reeducation of the disabled and their restoration to industry, which work the author divides into three stages: Functional reeducation, scientific prosthesis, and vocational reeducation. Methods of functional reeducation and apparatus of prosthesis which are successfully used by Prof. Amar in his work with the wounded are described and illustrated and mention made of the

schools for such reeducation which are already existent and those unedr consideration.

Speaking of the work already accomplished, the author says, "In the special circle of the wounded we have seen the return to a normal life made possible for the very great majority of the infirm, the debilitated, the less seriously disabled, and about 80 per cent of the wounded to the number of more than 2,500,000 in Europe to-day."

In regard to the placing of disabled men in industrial positions, Prof. Amar thinks that, while all available means should be utilized, still "it is indispensable that there should be a central organization comprising all the machinery of control and coordination. * * *

"Such seems to be the decision of Parliament, since it has given to the Minister of Labor the mission of organizing vocational reeducation in France. In this way a formidable waste of time and money may be avoided. When the schools are well under way and the proper placing of men assured, it will not be two years before all of our wounded who are susceptible of reeducation will be at least earning their own living without being in debt to anyone."

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *Annals, vol. 74. The world's food. November, 1917. 313 pp.*

Proceedings of the conference on the world's food held by the academy in Philadelphia in September, 1917. The papers are grouped as follows: Part I. The world's food: (*a*) Introductory; (*b*) The food situation with the neutrals; (*c*) Food for the allies; Part II. Food utilization and conservation: (*a*) A basis for individual and national diets; (*b*) Food conservation and utilization; Part III. Production and marketing plans for next year; Part IV. Price control. The discussion of conditions abroad includes papers on Great Britain, France, Japan, South America, Switzerland, Norway, Sweden, and Holland. Attention is given to the essentials of a safe diet and the dangers of too narrow restriction. The volume includes the report of the Food Inquiry Committee of Philadelphia on the trend of real wages in that city.

AMERICAN ASSOCIATION FOR LABOR LEGISLATION. *Standards for workmen's compensation laws. Revised to November 1, 1917. 131 East 23d Street, New York City.* [*1917*] *12 pp.*

Outlines the essential features that, it is believed, should be incorporated in all compensation laws in the interest of uniformity, as well as of justice to workers. Suggestions are given on the following general subjects: (1) Scale of compensation; (2) Employment to be included; (3) Injuries to be included; (4) Other remedies than those provided by the compensation act; (5) Security for the payment of compensation awards; (6) Organization of accident board; (7) Procedure for settlement of compensation claims; (8) Reports of accidents; (9) Rehabilitation.

BOGEN, BORIS D. *Jewish philanthropy: An exposition of principles and methods of Jewish social service in the United States. New York, Macmillan, 1917. 391 pp. Bibliography.*

Practically a revision of a course of lectures on Jewish philanthropy given for the past six years at the Hebrew Union College, Cincinnati, Ohio, and constituting "a statement of the principles evolved through the experience of the last two decades in various philanthropic efforts of the Jews of this country." Treats, among many subjects, of immigration, distribution, transients, insufficiency of income, and education.

BYERS, LIEUT. J. R., C. A. M. C. *Fighting tuberculosis. Military Hospitals Commission. Ottawa [1916]. 24 pp.*

This pamphlet has been written for the benefit of Canadian soldiers who are suffering from lung diseases and is put out by the Military Hospitals Commission. Only general principles and conditions are dealt with. After describing the battle to be fought by a soldier who is threatened or attacked by tuberculosis, a number of rules are given for his guidance which are summed up in the concluding paragraph of the pamphlet:

Remember, always, that the four great factors in the cure of lung diseases are rest, fresh air, good food, and cleanliness of mind and body.

CARNEGIE UNITED KINGDOM TRUST. *Report on the physical welfare of mothers and children. Liverpool, 1917. Four volumes (No. III not out). Illus.*

The report of a survey undertaken in 1916 by the Carnegie United Kingdom Trustees "because the rate of infantile mortality, with its predominant causes, and the health supervision of children from infancy to the age of admission to school are, in their opinion, among the most important questions of the present day relating to the well-being of the people."

CARTER, HUNTLY. *Industrial reconstruction: A symposium on the situation after the war and how to meet it. London, T. Fisher Unwin (Ltd.). 1917. 295 pp.*

The papers in this symposium, edited by Huntly Carter, are the result of an inquiry undertaken to ascertain the opinions held by a large number of distinguished public persons on one of the greatest problems Great Britain must face after the war. Most of them were first published in The New Age. They present the State view, the views of capital, labor views, economic views, and general views, the last taking up the question from the standpoint of sociology, psychology, logic, philosophy, religion, art and craft, law, and politics.

COLUMBIA UNIVERSITY. *How Canada organized her man power, by J. D. Scars. Columbia war papers, No. 14. New York, Division of Intelligence and Publicity of Columbia University, 1917. 11 pp.*

Tells of the work of the National Service Bureau of the Dominion in making an elaborate survey, inventory, mobilization, and organization of the human and industrial forces of the nation, describing how the information has all been card indexed. Mentions also the fact that a census is being taken of the occupations and trades of the soldiers at the front, and that a survey is being made of the industries and resources of Canada, with a view to placing returned soldiers in proper employment.

CONNOLLY, JAMES. *Labor in Ireland: Labor in Irish history and The Reconquest of Ireland. Dublin and London, Maunsel, 1917. 346 pp. Price 4s. net.*

James Connolly was one of the leaders of the Irish insurrection of Easter Monday, 1916, and he is described by Mr. Robert Lynd, who contributes the introduction, as "Ireland's first socialist martyr."

"Labor in Irish history," first published several years ago, is described by its author as "an explanation of the position of labor in the great epochs of our modern history, and with the attitude of Irish leaders toward the hopes, aspirations, and necessities of those who live by labor." In the foreword to "The reconquest of Ireland," published in 1915, he writes: "The underlying idea of this work is that the labor movement of Ireland must set itself the reconquest of Ireland as its final aim, that that reconquest involves taking possession of the entire country, all its powers of wealth-production and all its natural resources, and organizing these on a cooperative basis for the good of all."

DAWSON, WILLIAM HARBUTT, ed. *After-war problems, by The Earl of Cromer and others. London, George Allen & Unwin (Ltd.). 1917. 366 pp.*

Following an introduction by the editor, William Harbutt Dawson, the problems which Great Britain will have to face after the war are discussed under four heads: (1) Empire and citizenship; (2) National efficiency; (3) Social reform, and (4) National finance and taxation. Of particular interest to labor are papers on the State and industry, the State and labor, the relations between capital and labor, the position of women in economic life, and housing after the war.

EUBANK, EARLE EDWARD. *Loan sharks and loan-shark legislation in Illinois. New York, Russell Sage Foundation, 1917. 16 pp.*

Summarizes the findings of a survey, by the department of public welfare, of the loan-shark situation in Chicago in 1916, one result of which was the improved law which went into effect July 1, 1917.

GARDNER, LUCY, ed. *The hope for society: Essays on social reconstruction after the war, by various writers. London, Bell, 1917. 236 pp.*

Essays given in the form of lectures at the summer school of the Interdenominational Conference of the Social Service Unions held in Swanwick, England, in 1916. Includes, among others, Industrial and financial position after the war, by J. A. Hobson; Trade-union regulations: Employer's view, by Sir Hugh Bell; Trade-union regulations: The trade-union view, by Rev. Dr. A. J. Carlyle; Position of women in industry, by Margaret Bondfield; Development of the agricultural side of English life, by Christopher Turnor; and Land question after the war, by C. Roden Buxton.

HAMP, PIERRE. *La France, pays ouvrier. Paris, Nouvelle Revue Française, 1916. 66 pp. 3d ed. Price 2 fr. 50c. net.*

An outlook upon the work of French workmen after the war, based upon a brief review of the conditions which have led to the present relation of the French artisan to his trade, and the changing influences of to-day occasioned by the introduction of new machinery, methods, and ideas into French labor. It concludes with an optimistic view of the outcome of all factors in the development of labor when "France, the fighting country, shall emerge France, the working country."

HOWE, FREDERIC C. *The high cost of living. New York, Scribner's, 1917. 275 pp.*

An indictment of the existing system of monopoly and a brief for Government ownership of the railroads. The steps necessary to secure freedom of production and distribution are said to be the following:

To organize shipments from the farm; to have public ownership of terminal markets, local markets, and local abbatoirs; to have (1) public receiving stations for milk or (2) city operation of the sale of milk; and Government ownership of railroads.

INSTITUT INTERNATIONAL D'AGRICULTURE. SERVICE DE LA STATISTIQUE GÉNÉRALE. *Annuaire international de statistique agricole 1915 et 1916. Rome, 1917. 949 pp. Price, 10 fr.*

Report on agricultural statistics of all countries for the past 10 years by the International Institute of Agriculture, Rome, Italy. Deals with area and population, productive and nonproductive areas, acreage and yield of crops, live stock, imports and exports, consumption, prices, fertilizers and chemical products useful in agriculture, ocean freight rates, and rates of exchange. The table of contents is in five languages, but text and tables are in French.

KELTIE, J. SCOTT, ed. *The statesman's yearbook: Statistical and historical annual of the States of the world for the year 1917. London, Macmillan, 1917. 1504 pp.*

MAYOR MITCHEL'S FOOD SUPPLY COMMITTEE. [NEW YORK CITY]. *Hints to housewives. 71 Broadway, New York City, June, 1917. 112 pp.*

This pamphlet contains chapters on how to buy; how to care for food; meats; drippings and butter substitutes; substitutes for meat; fish; vegetables; cereals; bread; how to use left-overs; how to make soap; fireless cooker; canning fruits and vegetables; how to preserve eggs. It has been issued in the belief that if every housewife will carefully read, study, and put into everyday use the suggestions made, "she will not only be helping to reduce the high cost of living for her family and her neighbors, but will be rendering a distinct patriotic service to her country in this critical time." It aims to show how every housewife may do her part toward solving the food problem by simplifying the meals she serves and by seeing to it that not one bit of food is wasted.

MERCHANTS' ASSOCIATION OF NEW YORK. GREATER NEW YORK. *Bulletin, Vol. VI, No. 43. Nov. 26, 1917. 16 pp.*

This issue contains an extended account of how British industry was adapted to the war, being a summary of what the committee from the British Ministry of Munitions had to tell the manufacturers of the United States, with a selection of questions asked and answers given by the committee. It quotes the Treasury agreement entered into the Government, capital, and labor, which was embodied in the Munitions of War Act, 1915, giving the Minister of Munitions power to control factories engaged in the manufacture of munitions; binding labor to accept certain wages and permitting no fluctuation upward or downward in the wages except by consent of the Minister of Munitions; making strikes and lockouts illegal and arbitration compulsory; and including a waiver by labor of all practices and customs which tended to restrict either employment or output, in return for which the Government pledged itself to restore prewar conditions in shops after the war. The summary states that, as a result of this agreement, there has been no strike for higher wages since the war began, and only three strikes which may be regarded as serious. It recites the experience of Great Britain in bringing about economy of raw material and of man power by a system of licenses and by laws, in preventing the shifting of labor from one establishment to another, and in the employment of women to take the places of men.

—— *Industrial Bureau. Results of an inquiry into the effect of the war upon the employment of women in places formerly filled by men in New York City. 1 p.*

This investigation, it is stated, was made at the request of members of the merchants' association, who are or who expect to be confronted with a shortage of labor, the purpose being to supply answers to the following questions:

To what extent are female employees being substituted at the present time?

To what extent do employers expect that such substitution will be necessary in the future?

In general, on what types of work, not now ordinarily performed by females, are they satisfactory?

Are wages paid females the same as for males in the same or similar positions, provided production is the same in both quantity and quality?

What problems, if any, arise from the employment of females in positions ordinarily filled by male workers?

The report does not offer any opinions relative either to the desirability of substituting female labor or as to what methods should be employed; it is simply a summarization of the opinions of employers who have made such

substitution, this information being obtained by correspondence, by interviews, and by replies to a questionnaire from 160 employers of labor in New York City and vicinity. It appears from this report that, although a great many women are employed in various occupations, there has been very little substitution, only 35, or 21.9 per cent, of the 160 who reported on this question, stating that they are now using female workers more extensively than formerly, while only 9, or 5.6 per cent, have placed any large number of women in positions formerly filled by men exclusively. "The concern which is substituting females exclusively is still a rarity."

The report points out, however, a tendency to increase the employment of women in business irrespective of the situation created by the war, and that some employers who have formerly employed a few women in occupations also filled by men are now hiring women exclusively as vacancies occur. Nearly all employers reporting substitution of women also reported that the same wages are paid to them as were formerly paid to men. Some employers reported the operation of a distinctly different wage schedule for men and women, ignoring the policy of equal pay for equal work, but not necessarily paying lower wages to women than to men. Some problems confronting the employment of female labor where such labor is used to replace men were found to center about questions of management and changes in factory organization and in production methods. Following are the most frequent causes of such problems reported by employers:

Laws regulating the hours, time, and conditions of labor. These prevent women from working under the ordinary conditions existing in many plants.

The greater liability of women for accidents due to style of dress, as well as to physical causes. Frequently women are required to wear sleeve holders and caps to cover the hair. Additional safety appliances must be installed on machines.

The necessity of further specialization of labor, particularly where women operate machines. Women are machine operators and not mechanics, and therefore special occupations need to be created for men as helpers, machine repairers, and adjusters.

The necessity for special machinery or machine parts adapted to operation by females.

The necessity for substituting mechanical appliances, as conveying machinery, to minimize physical exertion.

MOORE, HARRY H. *The youth and the Nation: A guide to service. New York, Macmillan, 1917. 179 pp. Illustrated.*

"An attempt to arouse a wholesome interest among young men and older boys of college and high-school age in modern social evils, to show them how men have combatted these evils, and to suggest vocational opportunities in the warfare against them."

MORE, ADELYNE. *Fecundity versus civilization: A contribution to the study of overpopulation as the cause of war and the chief obstacle to the emancipation of women, with special reference to Germany. London, Allen & Unwin. [1917.] 64 pp. Bibliography. Price 1s. net.*

NATIONAL AMALGAMATED UNION OF LABOR [GREAT BRITAIN]. *Report and balance sheet for quarter ending June 30, 1917. Newcastle-on-Tyne, Richard Mayne, 1917. 66 pp.*

States that the membership at June 30, 1917, was 101,436, or a gain during the quarter of 10,421; and also that the financial balance at that time was £52,930 1s. 8d. ($255,784.25). Refers to a "new development in the relationships of unions of lesser skilled workmen" resulting in the formation of the National Federation of General Workers with which has been merged the previously

existing General Laborers' National Council. The objects of the new federation are stated to be:

The provision of facilities for questions of common interest being dealt with from a common center under the auspices of the federation, such questions to embrace: (1) Wages movements covering the interests of more than one union; (2) the condition of women's labor; (3) matters affecting the interests of affiliated unions which are directly under the control of Government departments; (4) the collection and distribution of information of common interest to the unions; (5) the maintenance of greater harmony amongst the members and officials of the affiliated unions.

NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS. *Report of the committee on occupational diseases to the twenty-seventh annual meeting of the national conference of commissioners on uniform State laws, to be held at the Grand Hotel, Saratoga, N. Y., August 29 to September 3, 1917. Second draft of a uniform occupational diseases act. [1917]. 16 pp.*

Largely taken up with a draft of a uniform occupational diseases act, being supplemental to the uniform workmen's compensation act. Includes a schedule of 28 occupational diseases, with description of the nature of the work or process which causes each disease.

ROCKEFELLER, JOHN D., jr. *The personal relation in industry. New York, 1917. 43 pp.*

An address delivered at Cornell University. The speaker expresses his belief that "the personal relation in industry will eventually be regarded as an important part of those college courses which aim to fit men for business life."

UNIONIST SOCIAL REFORM COMMITTEE. *The Health of the People—A new national policy. London, Argus Printing Co., Ltd. [1917], 63 pp.*

This is the report of a committee of Unionist members of Parliament which made, in 1913 and 1914, inquiries into housing, education, agriculture, industrial unrest, and poor-law reform. Although admittedly incomplete, since the activities of the committee have been interfered with by the war, the report has been issued at this time because of "the war wastage of man power and of the social and economic requirements of the future, as well as of the ignorance of the public concerning the administrative chaos connected with public health." It aims to show that "public health is purchasable"—that "efficient health legislation and control is, from the most strictly financial and businesslike point of view, a national investment producing the most liberal returns for work and money."

In the opening chapter the theory of public health is set out, the purpose being to show, by the quotation of statistics, the economic loss through disease and the possibility of reducing this loss by proper means of prevention and control brought about by a simple and businesslike organization. It is an economic argument for health reform. Emphasis is laid upon the necessity for reducing infant mortality in order to conserve adult health. In this connection Lord Rhondda, in a statement made as president of the local government board, said: "The examination I have been able to give to the subject * * * has convinced me that by proper coordination of the health activities of various agencies and the application of modern scientific methods it is not too much to hope that a thousand infant lives may be saved every week which are now needlessly lost."

The existing system of supervision of national health is described in considerable detail, revealing "uttermost complexity and dislocation," and apparently

indicating that "the system needs recasting from top to bottom." The arrangements by which the supervision of public health is distributed among six Government offices "constitute a guaranty of practical waste and inefficiency."

In considering the question of the reorganization of the central departments, the committee declares that eventually all health matters ought to be placed under a single department, but states that it is content at the present time to recognize the general view that a health department dealing with health in the most comprehensive sense attainable should be constituted, believing that in process of time the health functions of other departments will be transferred to it. The report then outlines what is to be expected of such a department.

WALDO, FULLERTON L. *Good housing that pays: A study of the aims and the accomplishments of the Octavia Hill Association, 1896–1917. Philadelphia, Harper Press, 1917. 126 pp. Illus.*

An intimate account of the pioneer model housing association in the United States, organized in Philadelphia in 1896 for "holding, selling, and leasing real estate." The association began with 5 properties valued at $10,500, and at the close of 1916 owned 179 properties valued at $276,026.63. This includes a considerable accession of property made in 1916, when it purchased the majority stock of the Philadelphia Model Homes Co. It works on a business basis, although content with a small dividend. The chief feature of its work lies in the rent collector, that "patient universal arbiter" who not only collects rent but gives domestic advice, settles neighborhood quarrels, and acts as welfare worker among the tenants.

The association manages renting properties for others; it had 17 such properties in 1898 and 228 in 1916. It employs salaried workers, the highest salary paid being $200 a month. Its monthly salary bill is $518.33.

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COST OF LIVING IN THE DISTRICT OF COLUMBIA.

FIFTH ARTICLE—WAGE-EARNING WOMEN: THEIR CLOTHING.

Cost of living studies have ascertained quite definitely the amounts and the costs of the principal articles of food consumed by the average workingman's family. Scientific dietary studies have laid down generally accepted standards of the kinds of food and the expenditure necessary to feed a family or an individual so as to maintain health and a reasonable degree of comfort. No corresponding standards in regard to clothing have ever been made. The task of working out standards of the kinds, the qualities, the quantities, and the cost of clothing indispensable for an average workingman's family or for individual workers in different occupations is well-nigh impossible. Very few attempts to set up such minimum clothing standards have ever been made, and these attempts have been confined to estimating the needs of working women. Even when so narrowed in scope, the task of setting up minimum standards of clothing requirements for working women presents very great difficulties because of wide variations in individual taste, in knowledge of materials and styles, in opportunities to buy advantageously, in capacity to make and mend garments, and in ability to consume clothes with the minimum of wear and tear. One woman can not feel decently dressed unless her head is adorned with a hat in the latest mode. Another woman will cut down on other items of expense in order to clothe her feet in silk hosiery and the latest and most astonishing things in shoes. Truly what is one woman's extravagance is another woman's economy, which brings confusion to those who wish to standardize clothing expenditures. One woman possesses the ability to sew, and by making her own clothing can dress well at much less expense than the woman who must buy all her clothing ready-made. Another woman possesses the inclination to mend and to "make over." Still

another possesses the faculty of good management and is capable of judging between wise and unwise selection even at bargain sales.

There is, however, one factor which remains fairly constant in its effect on clothing plans and expenditures. This is the occupational requirement. The standard of dress established for different occupations is scarcely a question of choice with the wage earner, but is determined by the environment in which she must work. The clothing requirements of the factory worker, laundry worker, stenographer, and saleswoman are very different. The majority of occupations open to women in Washington are those of the store and the office. The standards of dress imposed upon clerks, stenographers, and salesgirls are relatively high, and therefore in Washington a larger proportion of wage-earning women than in other cities must make a smart appearance in dress in order to feel themselves decently clothed.

Of all forms of conspicuous waste and competitive display, extravagance in dress is perhaps the most tempting and the hardest to resist. The American people, especially American women, are being almost constantly lectured about their extravagance in dress. It does not seem probable, however, that many of the wage-earning women who furnished detailed schedules of expenditures for clothing to the Bureau of Labor Statistics had been guilty of the sin of extravagance, as 42 out of the 53 spent less than $150 a year on clothes. All right-thinking people condemn extravagance. It is very difficult, however, to determine what constitutes extravagance in dress. The "creations" in form and color which are made by manufacturers and offered for sale by retailers point to the need for a Clothing Administrator to protect the public from involuntary extravagance and conspicuous ugliness and discomfort in dress. It does not seem clear that the working women themselves should be left unaided to cope with the style makers in solving the problems of what constitute sufficiency, comfort, and commendable adornment in dress, and what amount should be spent each year, on the average, to attain these ideals.

It does seem essential that emphasis be laid on the importance, especially to the working girl, of becoming clothes of good quality, kept scrupulously neat and clean. Expenditures for clothing of the right kind are really an investment on the part of the wage-earning woman. Self-respect and success in life depend in large measure upon proper clothes.

A SPECIAL STUDY OF CLOTHING EXPENDITURES.

As part of the present investigation into the cost of living in the District of Columbia an effort was made to ascertain, as nearly as

possible, the necessary cost of clothing for working women in different occupations. As noted above, most of the women wage earners in Washington are engaged in occupations such as store, office, and Government service, which require standards of dress somewhat higher than those existing in mill towns or industrial sections of manufacturing cities.

Thus, in considering the question of clothing costs, it seemed reasonable to limit attention to women engaged as saleswomen, clerks, stenographers, and in occupations of this character. Also it seemed desirable to limit this special analysis to strictly self-supporting women, living away from home, and between the ages of 19 and 35 years. The great majority of working women fall between these ages, and it is at that period of life that the character of her dress is of vital importance to the average woman whether or not she is at work.

Out of the total of 600 women covered by the investigation there were 53 who fell within the limitations mentioned and for whom information in sufficient detail was obtained to permit of careful analysis.

Eighteen of these 53 women were employed in stores, 17 in Government work, 13 in business offices, and 5 in telephone offices. Most of them were living as boarders in working girls' homes, private families, or boarding houses; but a few were renting rooms separately and doing their own food purchasing and cooking.

The total yearly incomes—including earnings, incomes from other sources, and gifts of new clothing—of these 53 women ranged from $258 to $1,096, and their yearly expenditures for clothing ranged from $22 to $260. The following table shows in detail the clothing expenditures of these women, classified by income groups:

CLOTHING EXPENDITURES OF 53 WOMEN FOR THE YEAR 1916.

Annual income.	Number of women.	Number spending on clothing per year—							
		Under $25	$25 and under $50	$50 and under $75	$75 and under $100	$100 and under $125	$125 and under $150	$150 and under $200	$200 and over.
$200 and under $300	4	.....	3	1	.....	.....	.....	.....	.....
$300 and under $400	5	.....	1	3	1	.....	.....	.....	.....
$400 and under $500	9	1	.....	1	2	3	2	.....	.....
$500 and under $600	13	.....	.....	2	3	3	3	1	1
$600 and under $700	7	.....	.....	2	2	.....	3	.....	.....
$700 and under $800	7	.....	.....	.....	2	.....	3	2	.....
$800 and under $1,100	8	.....	.....	.....	.....	.....	1	2	5
All groups	53	1	4	9	10	6	12	5	6

It is evident from this table that, even with a fairly homogeneous group of women, there are wide variations in the amount spent for

clothing. Thus, of the 13 women listed in the $500 to $600 income group the clothing expenditures varied from $50 to $75 at one extreme to more than $200 at the other extreme.

These variations in expenditures measure more or less accurately the degree in which these women were well or badly clothed. And an analysis of not only what these women spent, but also of what they got for the money, throws light on the question of the expenditure essential to maintaining a condition of dress that may be described as one of physical comfort, social decency, and agreeable outward appearance.

The following comments on this subject, it is to be emphasized, are based primarily upon the experience and opinions of the particular group of women referred to, verified to some extent by a study of store prices. The information was secured through the formal schedule obtained from each woman, supplemented in many cases by later interviews to secure data regarding the length of time clothing of different qualities may reasonably be expected to be worn, and also to secure expressions of opinion as to what they considered necessary in order to feel themselves well dressed. The prices quoted are those which were in force in 1916 and the early part of 1917.

THE COST OF BEING WELL DRESSED.

The majority of women, whose incomes are small, whose credit accounts are limited, and whose deficits, if incurred, must be met by themselves, are forced to keep their expenditures for clothing at about the same figure year after year. With some articles of clothing a system of purchases in alternate years is possible, but in the present study of the clothing expenditures it was found that, for almost all women, expenditures for the following items of dress repeat themselves each year: Hats, shoes, gloves, stockings, corsets, underwear, and certain miscellaneous articles. These items must be bought every year, the amount of "hold-over" being quite small. One woman, who, because of a $150 doctor bill, was able to spend only $22 for clothing, expended a small sum on each of these items except underwear, which was carried over from the previous year.

With outer clothing, such as suits, coats, sweaters, dresses, shirt waists, and dress skirts, the same uniformity of expenditure does not exist. For some of these items the plan of alternate years of purchase is a very satisfactory arrangement. Many of these women are highly skilled in the art of making their clothes last, but not a little complaint was heard that clothing bought nowadays does not have the wearing qualities of that bought a few years ago.

In order to allow for the optional factor, a consolidation has been made of these variable items under the heading "outside clothing,"

which includes suits, coats, sweaters, dresses, shirt waists, and dress skirts. The following table shows the average amounts spent by these 53 women for "outside clothing" and also for the separate items of dress which are common to all women and of which, as a rule, a supply must be purchased each year.

AVERAGE YEARLY EXPENDITURE FOR ITEMS OF CLOTHING, BY INCOME GROUPS.

Annual income.	Number of women.	Outside clothing (suits, coats, sweaters, dresses, waists, dress skirts).	Other articles of dress.							All clothing.
			Hats.	Shoes.	Gloves.	Stockings.	Corsets.	Underwear.	Miscellaneous.	
Under $300	4	$19.78	$5.19	$7.59	$0.77	$2.74	$2.25	$3.13	$2.99	$44.42
$300 and under $400	5	32.63	4.45	7.10	1.23	3.42	1.91	4.62	8.80	64.15
$400 and under $500	9	45.80	9.33	12.06	3.19	6.02	2.48	7.11	10.79	96.77
$500 and under $550	8	47.50	10.31	13.50	2.88	5.83	4.13	5.22	9.99	99.35
$550 and under $600	5	72.48	13.80	16.69	4.46	6.20	2.30	7.05	19.21	142.19
$600 and under $700	7	57.55	12.71	14.29	2.62	3.88	2.93	6.37	7.42	107.77
$700 and under $800	7	66.78	13.47	16.71	5.32	6.89	3.79	11.39	16.82	141.17
$800 and under $1,100	8	99.34	19.06	21.25	6.00	7.25	6.06	9.94	32.23	201.13
All groups	53	57.58	11.59	14.20	3.32	5.53	3.41	7.18	14.27	117.49

In the income groups under $400, the average expenditure for every item of clothing is below that which would permit of physical comfort and decency. Among the women with annual incomes from $400 to $800, considerable differences are found in the average amounts spent for "outside clothing" and miscellaneous items, but the average amounts spent for hats, shoes, gloves, stockings, corsets, and underwear vary only slightly between groups.

OUTSIDE CLOTHING.

Suits and coats.—The majority of working women consider a suit a necessity. Twenty-eight of the 53 women had expenditures for suits in 1916, and from later interviews with women on this subject it would appear that the others were wearing suits which were brought in 1915 or earlier. In these interviews the opinion was general that it was not economical to buy suits lower in price than $25, and many felt that it was better economy to pay from $30 to $35. Among those who bought suits in 1916, 8 paid between $16 and $20 (suits evidently marked down), 10 paid from $25 to $32.50, and 5 paid over $32.50. Most of the women interviewed on the subject were fairly well agreed that a suit of average price ($25 to $30) could reasonably be expected to last two years, and some reported that they wore suits of a higher price for three years.

The practice of buying suits and coats in alternate years seemed to be agreed upon in theory, if not always carried out in actual prac-

tice. The prices paid for coats ranged from $25 to $40, and they are worn from two to three winters. As a general rule, the women seemed to be able to wear coats longer than suits, barring radical changes in style. Some women planned to alternate the purchase of spring suits with winter coats. Others bought winter suits, and lightweight coats or sweaters. This latter was possibly a cheaper arrangement, but from the standpoint of health and comfort is less commendable, as every woman needs a warmer wrap for extreme weather than is furnished by a suit coat.

Shirt waists.—The black and white, or dark blue and white clothing required by the principal stores, which usually applies to the office force as well as to the saleswomen, creates a great demand for white shirt waists. Most of the women reported that six to eight white waists, for which they paid $1 to $1.50 each, were required for a season, with no assurance that they would last over until the beginning of the next season. Others bought about the same number at $2.50 to $3 each, and expected them to wear for two years. Still others bought one or two rather expensive silk waists, which could be washed easily, and would wear for one or two years. Aside from work waists, almost every woman planned to have at least one dress waist, perhaps of georgette or crêpe de chine, to wear with her suit. For this she usually paid from $5 to $8. Very often this waist was worn with her suit to theaters and parties, thereby taking the place of an evening dress. Thus, shirt waists for the average woman may reasonably be expected to cost from $6 to $15 a year.

Dresses and skirts.—When a suit is made to wear two years, one additional skirt or a one-piece dress was regarded as almost a necessity. Such a skirt usually cost from $5 to $10 and was worn not less than two years. One-piece dresses, however, were worn by the majority of girls, who expected a dress which cost about $15 to last one season.

The one-piece dress for summer was used by some women, but more common was the wearing of separate white skirts with white waists. The choice in white skirts varied from one $6 to $7 white corduroy skirt for dress wear, which will last two to three years, to three or four wash skirts at $2 to $3 which will wear for one season and possibly for two.

The question of afternoon and party dresses is highly individual. One woman who apparently found the greater part of her recreation in dancing stated that two light party dresses at not less than $16.50 each would be needed each year. These, she said, would soon become soiled and would not stand dry cleaning more than once or twice. The great majority of women, however, expressed themselves as well satisfied with one dress for party or afternoon wear. This would cost

about $25 and would wear two years at least. Some girls related with pleasure their ability in "fixing over" old party dresses so that they could be worn for three or four years. As mentioned before, however, the girl who had to economize closely usually dispensed with a party dress and substituted the wearing of a dress waist with a suit.

HATS, SHOES, GLOVES, STOCKINGS, UNDERWEAR, AND MISCELLANEOUS.

Hats.—The great majority of these women, who spent sufficient on clothing to be well dressed but not sufficient to be classed as extravagant, purchased two or three hats a year, usually at a total cost of from $10 to $15. The actual number of hats obtained, however, can not always be reconciled with the total expenditure for this purpose, as some women are able to, and do, make their own hats. Of the women included in this special study, 12 did all or a part of their own millinery work, one reporting four hats at a total cost for material of $8.08, and another, four hats at a cost of $6 for material.

Shoes.—Even in this selected group of women, the character of work performed makes a difference in the expenditure for shoes. Although the saleswoman would naturally need more shoes than the woman of sedentary occupation, three pairs of shoes a year was the usual number, with either two or four pairs not unusual. For high shoes, the women interviewed felt that about $6 was the minimum price which should be paid for shoes, and many felt that this minimum price was entirely too low for economy. Under these circumstances, it is not surprising that the averages for shoes should run from $12 to $17 a year.

Gloves.—In the case of gloves, two or three pairs seemed to meet the normal requirement. These were usually purchased at a total yearly cost of from $2.50 to $5. Where $2.50 or less was spent for two or three pairs of gloves, it is evident that only lisle, chamoisette, or silk gloves were used. The amounts ran higher when good kid gloves were bought.

Stockings.—Over half of the women in this special study bought between 5 and 10 pairs of stockings during the year, and slightly over one-fifth purchased between 10 and 15 pairs. The price per pair varied considerably. One of the women interviewed stated that she never paid more than 25 cents a pair for stockings and that she got along very nicely without any silk stockings. Another had found that three pairs of silk stockings at $1 per pair, mended immediately when necessary, would wear for one year. Another stated that she wore silk stockings all the time and that they were absolutely essential to her feeling of being well dressed. Still another said that she felt entitled to a pair of silk stockings "now and then" when she found

them at reduced prices. Of the total of 53 women, about equal numbers got their hosiery for less than $2.50, $2.50 to $5, $5 to $7.50, and $7.50 and over, with the general average being between $5 and $6.

Corsets.—Of the 53 women in the groups selected, 21 had bought one pair of corsets during the year, and 21 had bought two pairs. The number buying more than two pairs was negligible. No such uniformity existed as to price. Two dollars to $5 was the yearly amount spent by the majority, although a considerable number spent less than $2 and a few spent more than $5 per year.

Underwear.—Articles of underwear seem to have "hold over" qualities with some individuals, but among these women the general upkeep of underwear seemed to require a yearly expenditure of between $5 and $10. This amount covers nightgowns, white petticoats, corset covers, and all other lingerie, but $10 per year is not sufficient where silk petticoats are considered necessary to the standard of living. Although silk petticoats were reported by some, a great many did not regard them as essential.

Miscellaneous.—The miscellaneous items—such as umbrellas, rubbers, handbags, handkerchiefs, neckwear, aprons, and kimonos—usually averaged about $10. Where the amount spent on these items ran much higher than this it was due to the inclusion of furs and jewelry.

SUMMARY OF CLOTHING COSTS.

From the above analysis of clothing needs and expenditures the following summary may be drawn as to the approximate cost of clothing for a working woman who is well, but not extravagantly, dressed. The conclusions are based on the experience and opinions of the group of women referred to above.

As regards external clothing, it would appear that the average wage-earning woman who is well dressed usually chooses these items of her wardrobe from the following-priced articles: Suit or coat (alternate years), $25 to $30; shirt waists, $6 to $15; one-piece dress, $15; wool skirt, $5 to $10; summer skirts, $3 to $5; party dress (worn for two years), $25.

If close economy is necessary, a skirt at about $5 may be worn with separate waists in lieu of a $15 one-piece dress; or a dress waist, worn with a suit, may be substituted for an evening dress; or a winter coat may be worn for three seasons, or an evening dress for three or four years. In view of the range of choice, it appears that a woman may reasonably be expected to secure the outside clothing necessary for a good appearance at an expenditure of from $70 to $75.

As regards articles of dress other than outside clothing, the necessary expenditures would be distributed roughly as follows: Hats,

$10 to $15; shoes, $12 to $17; gloves, $2.50 to $5; stockings, $3 to $7; corsets, $2 to $5; underwear, $5 to $10; and miscellaneous, approximately $10. Allowing for individual variation in prices and choice, this means an annual expenditure of from $50 to $60 for these articles, which as a rule have to be replaced each year.

Combining these two amounts—outside clothing $70 to $75 and other articles of dress $50 to $60—the total yearly expenditures would range from $120 to $135, averaging approximately, say, $125.

In arriving at this sum, the assumption has been, of course, that the working woman purchases most of her wardrobe and need not devote her evenings and Sundays to the making of her own clothes. It is to be expected that such a woman will spend considerable time repairing, and to some extent, making over her clothes, but it does not seem reasonable to demand that a woman, with a full day's work to do, should spend her off-time working overtime at what would really be a second "job."

Nor in making the above computations has any allowance been made for discounts allowed by some stores on purchases made by employees. Such a system applies only to store employees and, at best, is not sufficiently general among the stores of Washington to make much difference in the clothing expenditures of working women as a class.

LAUNDRY.

Very closely related with the cost of clothing is the expenditure for laundry. Among the total of 600 wage-earning women covered by the Washington study, various laundry arrangements were found. Many of the women living at home received laundry free, others paid for it in connection with their board and lodging, and not a small number did all or a part of it themselves. Of those who had a definite expenditure for laundry, an average of 50 cents a week was about the minimum. Women whose work demanded a freshly laundered waist every day found a considerably larger expenditure necessary. From previous investigations on this subject it seems to be agreed that no wage-earning woman should be compelled by economic necessity to spend her evenings in laundry work, and if this condition is not to exist, her earnings must be sufficient to leave from $30 to $35 available for her yearly laundry expense.

COMPARISON OF STANDARD COSTS WITH AMOUNTS ACTUALLY SPENT.

The amount just derived—$125—as the approximate yearly expenditure necessary for maintaining a working woman in a "well dressed" condition in the city of Washington is somewhat higher than the minimum standards arrived at by other investigations in other cities. Part of this difference is due to the increased cost of

clothing since those investigations, part to the higher clothing standards arbitrarily set by conditions in Washington city, and part to the fact that most of the other investigations have been illiberal in their estimates of the clothing needs of a woman and optimistic in their estimates of clothing costs.

Thus, the New York State Factory Investigating Commission, in 1915, in submitting its conclusions regarding the clothing costs of working women, states that "the matter may be summed up by saying that a girl may respectably clothe herself on between $85 and $90, and that she can maintain a fairly good appearance with about $100."[1] The specimen list of clothing submitted by the commission is as follows:

Union suits, 3 at 50 cents; 3 at 75 cents	$3.75
Corsets, 2 at $1.50	3.00
Corset covers, 6 at 25 cents	1.50
Underskirts	1.50
Stockings	3.00
Wash dresses, 2	7.00
Party dress	15.00
Skirts, 1 at $2.50, 1 at $5	7.50
Shirt waists, 6 at 75 cents	4.50
Shoes, 2 pairs at at $3.50, plus $2 for repairs	9.00
Heavy waist	2.00
Hats, 1 at $5, 2 at $2.50	10.00
Coat, winter, one-half of $12	6.00
Coat, spring or rain, one-half of $8	4.00
Gloves	1.50
Rubbers, 2 pairs at 65 cents	1.30
Umbrella	1.00
Night dresses, 2 at 50 cents	1.00
Handkerchiefs	.60
Miscellaneous	4.85
	88.00
Highly desirable additions:	
Suit, one-half of $15	7.50
Slippers, one-half of $1	.50
Gloves, white, for parties	1.00
	97.00

Aside from the question of the sufficiency of the items listed, a checking up of the prices allowed in this table showed that, in most cases, it was impossible in Washington either in 1916 or 1917 to obtain the articles specified at the prices given.

The New York commission's standard of $88 per year may thus be taken as providing only the barest minimum for "decent" clothing.

[1] Fourth report of the New York State Factory Investigating Commission, 1915, vol. 4, appendix 7, pp. 1529–1531.

Thus, it is of striking significance to note that, even with this low minimum as a standard, 42 per cent of the 600 wage-earning women included in the Washington investigation had a yearly expenditure of less than that amount, and in many cases the expenditure was very much less. If the $100 standard, proposed by the New York commission as permitting "a fairly good appearance," and supported by the Wisconsin commission in 1916,[1] is taken as a minimum, then no less than 52 per cent of the 600 wage-earning women in Washington fell below that amount.

Finally, if the sum of $125, arrived at in the present study, is taken as the approximate yearly amount necessary for good dressing, then 68 per cent of the Washington wage-earning women are found to have spent less than that amount in 1916.

A detailed analysis of this subject is given in the following table, which shows, by income groups, the number and per cent of women whose yearly expenditures for clothing fell within each classified amount.

EXPENDITURES OF 600 WASHINGTON WAGE-EARNING WOMEN FOR CLOTHING IN THE YEAR 1916.

Annual income.	Number of women.	Number spending on clothing per year—									
		Under $25	$25 and under $50	$50 and under $75	$75 and under $87.50	$87.50 and under $100	$100 and under $112.50	$112.50 and under $125	$125 and under $150	$150 and under $200	$200 and over.
Under $300	133	22	25	37	11	8	10	6	7	6	1
$300 and under $400	141	5	18	25	19	15	19	8	18	12	2
$400 and under $500	107	5	9	17	12	12	11	10	18	9	4
$500 and under $600	88	1	7	13	2	14	10	6	17	10	8
$600 and under $700	53	.....	3	7	3	4	.....	7	9	10	10
$700 and under $800	43	.....	1	2	4	2	3	3	14	11	3
$800 and under $900	19	.....	1	1	1	2	.....	.....	2	5	7
$900 and under $1,000	9	.....	.....	.....	1	1	1	.....	3	2	1
$1,000 and under $1,100	7	.....	.....	.....	.....	2	.....	.....	.....	2	3
All groups	600	33	64	102	53	60	54	40	88	67	39

Annual income.	Number of women.	Per cent spending on clothing per year—									
		Under $25	$25 and under $50	$50 and under $75	$75 and under $87.50	$87.50 and under $100	$100 and under $112.50	$112.50 and under $125	$125 and under $150	$150 and under $200	$200 and over.
Under $300	133	16.5	18.8	27.8	8.3	6.0	7.5	4.5	5.3	4.5	0.8
$300 and under $400	141	3.5	12.8	17.7	13.5	10.6	13.5	5.7	12.8	8.5	1.4
$400 and under $500	107	4.7	8.4	15.9	11.2	11.2	10.3	9.3	16.8	8.4	3.7
$500 and under $600	88	1.1	8.0	14.8	2.3	15.9	11.4	6.8	19.3	11.4	9.1
$600 and under $700	53	.....	5.7	13.2	5.7	7.5	.....	13.2	17.0	18.9	18.9
$700 and under $800	43	.....	2.3	4.7	9.3	4.7	6.9	6.9	32.6	25.6	6.9
$800 and under $900	19	.....	5.3	5.3	5.3	10.5	.....	.....	10.5	26.3	36.8
$900 and under $1,000	9	.....	.....	.....	11.1	11.1	11.1	.....	33.3	22.2	11.1
$1,000 and under $1,100	7	.....	.....	.....	.....	28.6	.....	.....	.....	28.6	42.9
All groups	600	5.5	10.7	17.0	8.8	10.0	9.0	6.7	14.7	11.2	6.5

[1] Wisconsin Industrial Commission. Cost of living of wage-earning women in Wisconsin, 1916.

This table does not seem to bear out the generally current opinion that the wage-earning women of Washington as a class are inclined to gross extravagance in the matter of clothing. Of the total of 600 women 82 per cent spent less than $150 per year for this purpose; 93.5 per cent less than $200; and only 6.5 spent as much as $200. In some cases the larger annual expenditures represented a year of unusually heavy expense, due to some exceptional combination of circumstances, while in a very few extreme cases the large expenditure was plainly the result of unwise selection of clothes or of inexcusable extravagance. These latter cases occurred principally among women who were assisted by their families. Indeed, with the incomes shown in the preceding table, no flagrant extravagance in dress can very well exist.

RISK AND AVOIDANCE OF TNT POISONING.

BY ARCHIE RICE.[1]

Between 7,000 and 17,000 cases of TNT poisoning, resulting in between 135 and 475 fatalities, will probably occur among workers in American shell-loading plants during the production of the 78,000,000 rounds of cannon ammunition already ordered by the United States Government for use in the European war. These estimates, based on two standards of experience in munition plants in the United States, may be expected to hold, unless radical improvements be made in health-conservation practices.

About 5 per cent, or from 350 to 850, of the cases of poisoning will happen to workers within the first two days of their exposure; 75 per cent, or from 5,250 to 12,750, of the cases will become manifest after four to eight weeks of employment; and 20 per cent, or from 1,400 to 3,400, of the cases will develop after three months, five months, even seventeen months or more, of apparent immunity in TNT department work.

The fatalities may be expected to result within a few weeks, or may not take place until a number of months after the victim has been attacked.

These are not alarmist statements. They are deductions based on actual records compiled not during a hurried official investigation that was perhaps anticipated, but during 20 months of daily observation at a plant that did approximately one-tenth of all the TNT shell-loading work performed in the United States for various foreign governments allied against Germany.

At first glance these figures might appear unwarrantably large. But it should be understood that in the munition district there is a very great shifting of labor. The labor turnover at most munition plants is so great that it is not unusual to have from 2 to 30 different persons for each job during one year's operations.

There are interesting local problems often largely responsible for this remarkable unsteadiness of the labor supply. This article, how-

[1] Mr. Rice has been for two years connected with an American munition plant using hundreds of tons of TNT, has been among and interviewed scores of TNT workers, has himself been mildly poisoned with TNT, and has had access to voluminous confidential British reports on TNT poisoning in English munition factories. In October of 1916 he presented before the annual convention of the American Public Health Association a paper on "Munition-plant Poisons."

ever, concerns only the TNT risk. That risk might with reasonable and very inexpensive precautions and with proper medical supervision be reduced 80 to 90 per cent or even more, resulting in the preservation of life and in the safeguarding of human efficiency for labor's needs.

The sessions of the American Public Health Association's annual convention, held in Washington in October of 1917, were concluded with a six-hour discussion participated in by health officials, Federal officials, and munition makers. At that time it was intimated by representatives of the largest manufactories of TNT that there is comparatively little TNT poisoning, and that the slopping of molten TNT upon the outside of projectiles during the loading process is an unavoidable feature requiring handwork in the removal of the poisonous explosive substance.

A supplementary conference of health officials and munition makers was held in New York City during two days in December. Its purpose was finally to consider and perfect for the Council of National Defense a health and hygienic code for the munition industries. The longest and most vigorous discussion concerned TNT poisoning.

Federal officials and health officers generally voted in favor of a clause proposed as a humanitarian protection to workers known to have had an attack of TNT poisoning. The munition makers as a group voted it down. Efforts were later made for a compromise that would provide the worker with a definite memorandum that might aid him in illness later arising and after his leaving the company's employ. That effort also failed.

Opposition seemed to be of two kinds. It was argued that munition workers should not be told the real danger as it would make them unduly apprehensive. The other objection was that workers should not be given any memoranda to be used for self-protection of health or as a valuable guide to physicians possibly called upon later to treat them at places far from the plant, because such memoranda might sometime be used by adventuring lawyers as bases for troublesome suits for damages.

Contention was made for the employers that the proper procedure should be to educate all the doctors of the country in the diagnosis and cure of TNT poisoning. That might be accomplished after several years, but in the meantime TNT victims would multiply, and needlessly.

In the prediction of between 7,000 and 17,000 cases of TNT poisoning and between 135 and 475 TNT fatalities there is a wide range. This difference is due to the application of two standards. The smaller numbers, 7,000 cases and 135 deaths, are based on the general

record throughout 20 months of productive operations at the plant studied. The larger numbers, 17,000 cases and 475 deaths, are based on the record of that plant during its first seven and a half months of operations. Even during that earlier period the plant used many protective devices, some of which have not yet been introduced in other plants.

TNT poisoning is comparatively a new problem, and information on the subject is lacking or inadequate. How insidious TNT poisoning really is was not suspected until an alarming number of cases developed among munition workers in England. There tens of thousands of women are employed in the munition plants, all of which are directly under Government control, with stricter supervision of workers than has thus far been possible in the United States.

Even assuming that other American plants, during the making of munitions for the Allies, attained the degree of protection against TNT exposure that was achieved by the plant studied, then during the period of such loading there were in the United States probably 1,800 cases of TNT poisoning altogether and 43 fatalities, a majority of them perhaps not recognized as TNT poisoning and occurring at considerable distances from the plant where the workers were poisoned and perhaps weeks after they had left its employ.

That this general subject may be readily understood by persons not familiar with the manufacture of explosives or with the assembling of munitions or with medical phraseology all technical words and details are purposely avoided. For brevity various highly explosive compounds composed in whole or in part of trinitrotoluol will all be designated by the commonly used three-letter symbol TNT.

High-explosive shells are steel projectiles having a cavity which is loaded with a powerful but relatively shock-proof chemical substance that explodes by percussion of an interior metal fuse when the shell strikes. The detonation of the bursting charge must not occur in the gun or near the gun but at the instant of contact with the distant objective. The projectile, after a long curving flight, strikes anywhere from 1 to 28 miles from the cannon that hurled it. The detonation of the interior high explosive rends the shell asunder in hundreds of destructive fragments, thereby widely distributing the damage. For this reason a safe and effective bursting charge is of great importance.

Ordinary powdered sulphur, which in itself is harmless, becomes sulphuric acid when chemically treated. Ordinary harmless white chunks of niter (sometimes called saltpeter or nitrates), yielded by the inexhaustable shallow mines of Chile's highland plateaus, become nitric acid when chemically treated with sulphuric acid. Ordinary harmless sweet glycerin, which is a four-times-refined by-product

from the foul-smelling refuse grease of a soap factory, becomes, when chemically treated with nitric acid, the frightfully destructive nitroglycerin, which is an innocent-looking, oily fluid resembling white-sugar sirup such as is used for hot cakes. When nitroglycerin is soaked up in fine sawdust and placed in paraffin-treated paper tubes it is known as dynamite, and each tube as a stick of dynamite.

Nitric acid chemically combined with toluene, which is a coal-tar by-product of gas works and of dye works, becomes tri-ni-tro-tol-u-ol, hence its abbreviation TNT. But pure trinitrotoluol is not the only bursting charge loaded into steel projectiles and now known as TNT.

USE OF AMATOL IN ENGLAND.

In England 70,000,000 shells are reported to have been loaded with amatol. This is a chemical compound of nitric acid and ammonia, with a one-fifth admixture of trinitrotoluol. Ammonal, alumatol, and some other mixtures, each containing not less than one-tenth trinitrotoluol, are also used. Bearing in mind that in England all these substances of minor trinitrotoluol content are called TNT, it becomes evident that while England loaded 70,000,000 shells with amatol, the workers were handling only about as much real TNT as would be required in America for 14,000,000 shells. Among approximately 100,000 workers in all manner of munition plants in England there were discovered up to the end of the year 1916 a total of 53 TNT fatalities. The use of trinitrotoluol alone might have made the death toll several times as great. England also had 181 TNT jaundice cases. If TNT alone had been used there would have been five times as much handled and possibly a corresponding increase in TNT jaundice cases.

The record of TNT poisoning in England does not sufficiently convey an idea of the general danger of TNT for those who handle it. Amatol, as used in shell-loading plants in England, is a moist, dustless mixture of somewhat the consistency and appearance of vanilla ice cream or lemon water ice. In that form it issues from a machine and is mechanically squeezed into the shell, about as dental cream is squeezed out upon a toothbrush, and without the early incidental scattering of dust such as occurs with pure TNT. Each bursting charge of amatol, which in itself is one-fifth pure TNT mixed with four-fifths ammonium nitrate, is finally sealed over in the shell and the detonating-fuse cavity lined with molten TNT in amount not one-tenth as great as the shell would receive if loaded with pure TNT. Where less TNT alone is used and the process produces less dust there must be less contamination of the breathing atmosphere, and for this reason there is probably less TNT poisoning risk in England than in America for a like number of shells loaded.

Pure TNT is a canary yellow, powdery substance, consisting of tiny crystals almost as fine as dust. It melts at 80° centigrade (176° F.) and becomes a reddish-brown fluid resembling maple sirup. It can be dissolved in ether, in acetone, and in some other substances. It is bitter to the taste, and its presence in the atmosphere, even in scarcely detectable dust or perhaps only as invisible fume, may readily be noted by a bitter taste if the mouth be occasionally opened as in talking. This quick effect through the mouth and probably upon saliva that may later be swallowed indicates perhaps the manner in which is caused much of the TNT catarrh of the linings of the stomach and intestines. Severe frontal headache and sometimes vomiting follow soon after some comparatively short exposures to TNT atmospheres.

There were 169 cases of TNT poisoning at the plant studied. These cases consisted of 137 workers who had but the one attack, 12 who had two attacks, and 2 who had four attacks. There were three fatalities, and two of them resulted after a second attack, indicating that there was individual susceptibility and that these workers should not have been subjected again to TNT risk without careful medical supervision.

In England, where the summers are much cooler and there is relatively less escape of TNT to menace the worker, it is claimed that the number of initial cases of TNT poisoning has been materially reduced, and therefore the productive efficiency of the plant force improved, by serving free to the workers milk or hot cocoa. Possibly somewhat similar results might be achieved, and more cheaply and practically, when milk is difficult of purchase near isolated munition plants, by having all workers rinse out their mouths several times a day with warm water to remove all saliva impregnated with TNT. In England, moreover, no TNT worker is now employed longer than two weeks without being shifted for a like period to some department not exposed to the poison. The most precise clothing regulations are enforced, and neither food nor tobacco can be brought beyond the house where absolutely all clothing is removed and changed both before and after work. After a few experiments in that country it was claimed that the entry of TNT poison was not so much by inhalation of the dust and fume or by the swallowing of dust, as by actual absorption through every part of the skin or of the mucous membrane exposed to TNT dust or fume or vapor. Some deny that surface absorption of TNT is the principal means by which the poison enters the system.

TNT is not an immediate poison. It is not a direct cause of death. Its grave danger lies in the fact that it so impairs certain organs that death ensues because of the destruction of some necessary function

of the body. This article makes no claim to presenting any medical solution for the problem of TNT poisoning, but it does claim to present some new facts as to TNT risks and in a novel manner.

Imagine a loading plant with a daily possible output of 10,000 to 15,000 rounds of ammunition of three-inch caliber. A three-inch shell is but one-twentieth of an inch larger in diameter than the famous French 75-millimeter shell that is to be most extensively made by the United States. Such a plant would employ perhaps 1,000 persons, but only 300 of them would be required in actual TNT departments, 300 in production departments where workers are only occasionally exposed to TNT, and the balance of 400 workers would not be at all exposed to TNT hazards.

WASTE OF TNT.

Applying the general experience at the plant studied, such a works would lose in waste at least 400 to 600 pounds of TNT a day, and more likely from 960 to 1,440 pounds in vapor, in fume, in dust, in dirtied scrap particles, and in unrecovered spattered bits. This loss would occur mostly in proximity to the 300 TNT workers. In bulk that much powdered TNT would be about three to twelve barrelfuls.

With the 78,000,000 shells contracted for up to Christmas of 1917 the probable total loss of TNT in the loading processes incident to the making of the new Government ammunition would be at least 3,120,000 pounds, with the conserving methods used at the plant studied, and probably 7,488,000 pounds, with the percentage of waste existing at most of the other loading plants in America.

The difference between these extremes in probable TNT waste on loading contracts for the Government is 4,368,000 pounds of TNT. And TNT was formerly sold at approximately $1 a pound. Under such conditions it would appear that for those manufacturing TNT for the loading plants the greater the waste of TNT assumed as permissible or unavoidable the greater the amount of TNT that would have to be purchased by the Government, which means the American people.

As most United States war contracts are based on actual cost of materials, plus 10 per cent allowed the contractor as profit, there is no great incentive to exercise the most exacting economy.

If the Government would take adequate precautions to lessen the amount of TNT permitted to escape and be wasted it would at the same time be lessening the TNT risk for the workers. Also there would be a saving of about $4,000,000 in TNT values. The expenditure of a very small percentage of such a saving would give ade-

quate plant and Government provision for a reduction of the TNT risk to the lowest possible percentage.

In a changing force of about 500 men at the plant studied there were during 20 months, in addition to the 169 cases of TNT poisoning and 7 or more not recorded because of insufficient data, 55 production accidents, and 80 accidents that occurred in construction, repair, and outside work or duties.

That means that 56 per cent of all the medical cases at the shell-loading plant were due absolutely to TNT poisoning, that 18 per cent were due to accidental injuries incident to production work, and that 26 per cent were connected with ordinary construction and repair work and the usual slips, knocks, and hurts where much rough manual labor is performed. Perhaps the most serious of the accidental injuries was a broken leg. One man had an arm broken in cranking a car. TNT poisoning caused three known fatalities.

The point is that medical protection for TNT workers is a much more important feature than was even suspected, and should include preventive measures suggested by a carefully observing resident physician. In all other cases at the plant medical protection implies only curative treatment after the accident has happened.

FOUR KINDS OF TNT POISONING.

TNT poisoning manifests itself in four different ways.

In its simplest form it is merely a local irritation of the exposed skin of the hands, face, or arms, with tiny watery eruptions somewhat like those caused by poison ivy. This eczema usually responds readily to simple medical treatment on the surface and does not interfere with the worker's employment, although occasionally causing some itching. The skin cases at the plant studied were only about 5 per cent of the whole number of TNT afflictions, and there appeared to be but one skin case with long-persisting effects.

The commonest form of TNT poisoning is that affecting the stomach. The stomach and intestinal effects are probably caused by TNT, in fume[1] or dust, or both, and perhaps in vapor, entering through the mouth and the nasal passages and also repeatedly swallowed in impregnated saliva or with foods touched by hands soiled with TNT. The result is that the membranous linings of the stomach and the intestines become affected with a catarrhal condition, probably due to the irritant effect of the poison. There are griping pains as in other cases of gastritis. Many of these TNT cases are accompanied by some constipation. It may be argued that the poisoning induces constipa-

[1] By fume, as here used, is meant that rather intangible essence that is not a vaporous emanation or an obvious dust. One readily detects by the fume the proximity of a glue factory, a tannery, a cesspool, even in a dry atmosphere.

tion, or that failure to keep the bowels free increases susceptibility to TNT by stopping natural channels for eliminating poisons from the system. In a milder form this stomach condition is expressed in violent frontal headache, nausea, and the usual quinine-like, bitter taste in the mouth, and is sometimes caused by a comparatively slight exposure to TNT. Such an attack lasts only 24 hours or so. Records at the plant studied showed that about 60 per cent of all the TNT cases were classified as TNT affecting the stomach. With this condition there may have been other symptoms not recorded or determined.

Another form of TNT poisoning is anemia, manifested by a progressing loss of color. This develops gradually, and reaches no obvious climax as in the skin eruptions or the griping stomach pains, both of which conditions are quite evident to the affected worker. TNT anemia is different from the deadly, pernicious anemia. The latter is the result of a lessening of the red corpuscles in the blood, but TNT anemia is said, in England, to show on post-mortem examination a lessening in the red coloring matter in the marrow within the bones. It is thought to be one of the most dangerous and insidious forms of TNT poisoning, but tendencies toward its development ought to be easily detected by the physician while making daily strolls through the TNT departments.

Perhaps the form of TNT poisoning most often having fatal results, unless it be detected in time and properly diagnosed and prescribed for, is TNT jaundice. At its worst, this develops into the always fatal acute yellow atrophy of the liver. This is a condition characterized by profound destruction of the liver cells.

Two of the TNT deaths among the workers at the plant studied were diagnosed independently by different physicians as acute yellow atrophy of the liver, and a third TNT fatality is believed to have been a TNT jaundice development rather than a TNT anemia case. Both anemia and jaundice caused by TNT are probably due to cumulative absorption of TNT fume, dust, or vapor.

Susceptibility to TNT poisoning and immunity from it vary as widely as do the dispositions and personal and hygienic habits of the individual workers. But there are persons with certain medically discoverable weaknesses and tendencies who should never be employed in TNT departments. Among those who should for their own safety be most emphatically forbidden to work in TNT atmospheres are persons using alcoholic beverages and persons who have been addicted to their use. This is so because alcohol has already affected stomach linings or the liver or is weakening these points of greatest vulnerability to TNT attacks. Persons habitually breathing through the mouth should also be excluded from TNT work.

TYPICAL CASES OF POISONING.

The following are some typical cases of poisoning of TNT workers:

A. A., an American, age 21, after five months' continuous employment and immunity in the melting department, had a gastritis attack from TNT poisoning and was ill one week, being prescribed for by the consulting physician. He then resumed the same work, apparently all right. Two and a half months after his first case he had a second attack, one and a half months later he had a third attack, and two months later a fourth attack. After 20 months in the melting department, latterly as foreman, he quit to become a Government inspector in another plant. Apparently he had suffered no permanent ill effects. He was a tall, healthy young man of exemplary habits and never drank.

L. A. T., a Frenchman, age 21, after several weeks' employment in the boring department, had an attack of TNT gastritis and TNT skin poisoning. He was away from work one week under the doctor's care. On his return to the plant he was assigned to a department handling only smokeless powder and brass cases in a building apart from TNT atmospheres. Because the pay there was less than he had been getting he shifted, after a few days, back to his old job. There, in the boring room, 17 days after his initial attack, he developed such a condition of face poisoning and swelling that he quietly quit work and disappeared. Three weeks afterward he died at his home in Canada, 400 miles from the plant. He drank.

W. S. T., an American, age 31, after several weeks' work in the boring department, developed a very severe case of TNT poisoning, with symptoms at first worse than those shown by two others who died. He went to his home in a town about 10 miles from the plant and was there visited by the company's doctor, whose instructions he and his attending wife followed carefully. Practical nursing and dietary during three weeks helped to restore him to an apparently normal condition. He then returned to the plant and was assigned to the carpentry force, with which he continued to work in good health for many months.

S. N., a Pole, age 20, after several weeks' employment in the melting department, quit work and disappeared. A fortnight or so later the company doctor heard a rumor that this man was very ill at his home in a small town 8 miles from the plant and that his relatives attributed his illness to a TNT attack which had made him decide to quit work. He was being treated by the village doctor. Two months after the original effects of the TNT poisoning this worker died of acute yellow atrophy of the liver, having had the later progressive symptoms peculiar to TNT poisoning. He had been and was addicted to beer drinking.

J. A. W., an American, age 55, had been employed many weeks in the boring department when he developed a case of TNT gastritis and other symptoms of TNT poisoning in a bad form. He lived on his farm about 15 miles from the plant. He remained there ill 20 days and under medical treatment, then returned to the plant and was assigned to carpentry work, which was mostly in the open air. Somehow he was briefly exposed to TNT again and got another attack. He then quit the plant altogether and went back to live on his farm, showing pronounced evidences of TNT jaundice, which became worse, his eyes being almost completely yellow and his face swollen. He was in the same condition, apparently doomed, but still able to be up and about 17 months after his initial attack. He had been and was a very heavy drinker. This second attack was not reported to the plant doctor.

H. F., an American, age 27, after seven months' employment at shellacking the bored-out cavity in the TNT charge in the shells had TNT gastritis, and five months later had a second attack while at the same work. Following these attacks he experienced unusual physical weakness and tired so easily that he had to sit down to rest several times during a mile walk to or from the cars. His personal theory was that by continuing while at work to chew tobacco, which he disliked, he rid his mouth of TNT-impregnated saliva. Eight months after his second attack and while at the same daily task he reported that his undershirts still showed each week deep TNT perspiration stains under the arms and that his wife had to bleach out these large reddish-brown blotches by soaping them and laying them in the sun before she ventured to hang the garments on the line where they might be seen by the neighbors.

W. P. W., an American, age 23, after three months' service in the cooling department quit work when the week ended and two days later called on the company doctor for TNT treatment, explaining that he had an attack two days previously. The doctor told him to come the following day for further treatment. The patient never returned. Not until nine days later did the doctor locate him, in a private boarding house in a city 9 miles from the plant and 14 miles from the doctor's office. The patient was ill abed. His landlady, who was attending him, was admonished not to let him get up or go out. When the doctor visited the place next day the patient was gone. The landlady reported that she had been unable to deter him from leaving, that some friends had come, and that they had all gone off together for a day's celebration at a fair in a city 20 miles away. On his return the next day the patient was removed to a hospital. There he continued to grow worse. Four weeks after his initial indisposition he died of acute yellow atrophy of the liver,

suffering toward the end considerable pain and the usual state of coma preceding death. He was addicted to beer drinking and the use of other alcoholic beverages.

C. D., an Englishman, age 28, after three months' work in the melting department had an attack of TNT poisoning and was transferred to a department where he was unexposed to TNT. There he continued to work, but 11 months after his case of TNT poisoning he still found himself unable to retain urine beyond a few moments following the first urge, and could never sit long in a movie show or elsewhere without having to get up and hurry out. This might have been due to some other bladder condition, but his kidneys were not very strong when he began the TNT work.

CASES OF APPARENT IMMUNITY.

J. W., an American, age about 40, was employed in the TNT departments during a period altogether of 20 months—as foreman and as night superintendent and then as head of the melting and pouring department. Daily he touched TNT with his bare hands. Often he ate sandwiches while his hands were unwashed of TNT and his mouth unrinsed of TNT. Later he came in proximity to TNT fume and more TNT vapor than before. The obvious immunity of this veteran powder man, who had worked for years in a dynamite plant, was often cited as an example of how almost anybody could avoid TNT poisoning by leaving liquor alone and taking good care as to health and hygienic habits. Then, after 17 months of immunity, this man got his first case of TNT poisoning, a gastritis attack. He prescribed for himself, and he neither quit work nor reported to the doctor. He swallowed two fresh raw eggs and took a laxative every day during the continuation of the perceptible effects of the TNT. Two weeks later he was similarly poisoned the second time. Two weeks after that he was poisoned the third time, and in another two weeks he was poisoned the fourth time. Each case he treated in his own way and continued with his work. He was a total abstainer, but earlier in life had indulged in alcoholic beverages.

J. J., an American employed as a driller in the boring room, worked in TNT atmospheres altogether a total of 872 hours, including one day of 12 hours' service and six days of 10 hours' application to the work. A few weeks after the period of the long working days he experienced an attack of TNT gastritis in the cold weather two days before Christmas. He was cared for at home, and did not report to the plant doctor. Except for the seven long workdays mentioned, all his service, and especially all of that following the time of his attack, was on a basis of six days a week and eight hours a day.

R. G., an American, age about 40, worked 48 consecutive weeks as a driller in the boring department, exposed to its fine dust and to its fume conditions, during a total of 2,622 working hours, without experiencing any ill effects from TNT. At first, when conditions were not good, he worked seven days a week three different weeks, putting in 74, 71, and 70 working hours those weeks. Afterwards, when conditions were improved and work was on a six-day and eight-hour basis, he put in 51 consecutive weeks, and was not affected by TNT. In that time there were two or three days of the hot and humid season when the thermometer just outside the rather closely walled and cement-bulkheaded boring room indicated 100 degrees in the shade.

M. P., an Italian, age 40, was continuously employed 20 months in the TNT melting and pouring department, but had frequent daily periods in the fresh air while passing to and from the TNT magazine. He was daily exposed to TNT dust while opening fresh boxes of the fine powder and to contact with TNT while placing in boxes scraps of TNT castings. He was also exposed to TNT vapor while personally cleaning out the big iron kettles in which the TNT is melted. Yet he was never affected by TNT in any apparent or self-discoverable manner. The only sign of his TNT employment was the regularly yellow-stained palms of his hands. Asked what he did to avert ill effects and keep himself in such evident prime physical condition, he replied: "Never drink; oh, my God, no! Never eat the sandwich with TNT on the hands. Never eat before wash the face and the hands. Wear the gloves, sure. When clean the kettles tie the handkerchief across the mouth, the nose. Eat plenty good grub. Sleep good."

At the plant studied about 95 per cent of the various and changing workers dwelt in more than 12 different towns, scattered from 2 to 12 miles from the place of their employment.

MEDICAL SUPERVISION.

At the end of 20 months of productive operations only about 7 per cent of the workers who had had TNT attacks remained in the company's employ. During those 20 months this plant had four different doctors. In the first nine months 108 TNT cases were observed and treated by a doctor whose office was in a town 5 miles from the plant and in a direction opposite to the general trend of workers' dwelling places. Three of those cases terminated fatally, and another will probably end the same way. At least seven other cases did not receive medical attention.

With the readjustment of the plant to further improve conditions, based on experience gained, patients were no longer conveyed by a

plant motor to this doctor at a distance. A young resident physician was secured for the plant, who observed and treated 43 TNT cases during his seven months' service. Two cases escaped medical notice. Another young doctor succeeded the first plant doctor and resided at the plant three months. During that time he observed eight cases of TNT poisoning. Several others did not report to the doctor. A third young plant doctor then succeeded to the work. He was resident during only the last month of this study, and he observed and treated but one case of TNT poisoning. Four or more other TNT cases occurred without reporting or seeking medical attention.

At no time was there preexamination of the physical condition of the workers, especially of those assigned to TNT departments. There was no touring by the doctor of TNT departments for a daily or weekly or any other casual observation of the appearance of individual workers. Much of the time about 70 per cent of the workers in the drilling department had bluish lips.

These conditions, it should be noted, existed at a plant where unusual efforts were made to conserve the efficiency of the workers, to protect them from dust and fume, to give them workrooms adequately warmed in the frigid season, and abundantly ventilated and well screened against mosquitoes and flies in the hot and humid season, and finally to pay them well and not to work them longer than eight hours a day. It is obvious that the risks must be greater at other plants similarly employing large numbers of shifting and little-known workers to load TNT into projectiles, but not observing similar precautions.

Very naturally it may be asked: If such conditions with respect to TNT exist in the munition industry of the United States why have they been permitted to continue? The answer is that the munition makers themselves have not yet appreciated the danger of TNT poisoning. TNT is comparatively a new commodity for extensive production in America, and the possibilities of its insidious influence upon certain peculiarly susceptible workers have not been studied or classified as an industrial problem.

As an illustration of how little is definitely known on some of these war subjects it may be mentioned that a month before Christmas of 1917 it was not generally known, even among ordnance officers, in the United States that a high explosive called amatol had already been used for three years in England and that 70,000,000 projectiles had there been loaded with amatol as the bursting charge. When a group of practical ordnance officers visited the plant studied and there witnessed the first shell loading with amatol ever attempted in the United States, the whole process was viewed with interest and surprise, and when those demonstration loads were given their

firing test at a Government range and produced a very high percentage of satisfactory bursts there was yet more enlightenment upon a subject that is three years old in England. TNT poisoning is being carefully studied in England and its risks lessened.

What effect work weariness may have in increasing susceptibility to TNT was not determined at the plant studied. But during the 20 months the record of incidence of TNT poisoning cases showed that 24 cases occurred Mondays, 15 occurred Tuesdays, 24 occurred Wednesdays, 16 occurred Thursdays, 32 occurred Fridays, 52 occurred Saturdays, and 6 occurred Sundays.

That Saturday showed 66 per cent more cases than any other day and that Friday was the next highest risk day seem more than a coincidence. It may indicate accumulating poison in the system or work weariness after four or five days of continuous exposure. A partial explanation may lie in the fact that at this plant the workers were paid off every other Friday, and that the chief and most easily available amusements were those offered by the numerous saloons sprinkled closely about the munition plants or in all of the towns where munition workers dwell. In England experiments made with TNT purposely taken into the human system in larger than a daily work-exposure possibility showed TNT in the urine within about two hours after taking. The presence of TNT continued to be manifest up to about 24 hours after taking, but after that only decreasing traces of TNT were detectable. This might indicate that when the human system is given a weekly respite of 24 hours from TNT exposure the body then has a chance to readjust itself in preparation for another period of exposure. The comparatively few Sunday cases here recorded were due to the infrequency of Sunday work.

Records seemed to indicate that the hot or perhaps the humid weather greatly increased the risk of TNT poisoning. It may be that because TNT has a great tendency to absorb moisture the atmosphere in hot and humid weather is more than usually impregnated with TNT as vapor.

Nothing of value was deducible from the insufficient data available as to comparative racial susceptibility among the TNT workers. A majority of the TNT workers were Americans, but no percentages as to race were compiled. After varied experience native Americans were preferably employed for TNT work. Of the 151 individuals making up the 169 TNT poisoning cases 105 were Americans, the next highest numbers being 18 Poles, 16 Italians, and 8 Russians. No women and no Negroes were employed, and only a few men of 18 and 19 years of age, and but two or three of them in the TNT departments.

COMPARATIVE WORKING RISKS.

One very helpful conclusion was reached as to TNT risk. The relative percentage of risk was determined for the several departments. So far as their possible exposure to TNT poisoning is concerned, the employees at a shell-loading plant may be divided into three classes. The first and almost unexposed class consists of the office force, the machinists, electricians, tinsmiths, carpenters, firemen, guards, yardmen, and chauffeurs—altogether comprising about 40 per cent of the plant force. They have nothing to do with production-department work and rarely have occasion to incur personal risks of TNT poisoning.

The second and only occasionally exposed class consists of all those workers engaged in plant-production tasks but not employed in any of the TNT departments. This group forms about 30 per cent of the plant force, comes occasionally in contact with some TNT fume or dust, and furnishes less than one-tenth of all the TNT poisoning cases.

The third and regularly exposed class includes all those workers in the TNT departments, a group generally about 30 per cent of the plant force. This class of workers comes constantly in contact with TNT or its dust or fume and furnishes more than nine-tenths of all the cases of TNT poisoning.

This narrowing of the TNT problem is a partial reply to the sweeping objections of some munition makers to proposed medical examinations and frequent inspections. The chief contention by such objectors is that it would be handicapping, delaying, and expensive to have to examine all the tens of thousands of workers in the munition plants.

Workers in the TNT departments of a shell-loading plant may be divided into four groups, according to the nature and sequence of their tasks.

In the first TNT group are those engaged in melting the powdered TNT and then stirring it and pouring it into the steel projectiles. This is a process that necessarily liberates considerable TNT vapor and much TNT fume, and also there is a relatively small escape of TNT dust into the atmosphere, incidental to the opening and emptying of the original boxes. About 40 per cent of all the TNT workers are needed in this melting and pouring department. In the plant studied the melting department, when operating under its improved conditions, showed that in a year's operations every 100 jobs yielded 64 TNT poisoning cases. To make this risk rate clearer: Here, let us say, is a department regularly requiring 100 workers a day. The personnel of the working force may and it does change, but there are only 100 jobs, even if 1,000 different persons be employed

to keep those jobs filled. The number of TNT poisoning cases produced by the 100 jobs in a year is the risk rate in that department. Some workers may have remained only one day, others may have worked weeks or months; still others may have continued throughout the year. But no matter what the varying individual experience or susceptibility, the number of TNT poisoning cases produced by those 100 jobs is here called the risk rate. If the 100 jobs could have had a new set of 100 workers each day the risk rate would have appeared very small. If the 100 jobs could have had the same 100 men throughout the year there would have been more TNT cases, and the risk rate would have appeared much larger.

In the second TNT group are those engaged in cooling the bursting-charge of TNT that has been poured into the shell, removing the petticoated funnel from the shell orifice, stripping the protective paper wrapping from the outside of the shell, and shearing or cutting off with bronze saws the excess chunk of protruding TNT above the filled shell cavity. In this process there is a little vapor, much TNT fume, and more TNT dust and contact than occur in the melting and pouring department. The cooling department requires about 10 per cent of all the TNT workers. In the plant studied, the cooling department, under improved conditions, showed a yearly risk rate of 33 TNT poisoning cases for every 100 jobs.

In the third TNT group are those employed at or about machine-run drills used in boring within the TNT charge in each shell a central cavity for the reception eventually of the detonating fuse. This boring process creates quantities of very fine TNT dust, produces some TNT fume, but is not accompanied by any TNT vapor, except such as may be in the air because of very fine dust converted in humid weather. The boring department requires the services of about 20 per cent of all the TNT process workers. In the plant studied, the boring department, after adopting improved methods, developed a yearly risk rate of 33 TNT poisoning cases for every 100 jobs, the same risk as in the cooling department. However, this risk rate for the boring department would perhaps be too low in ordinary circumstances. It was developed during more than a year's operations with an unusually well selected class of workers.

In the fourth and last TNT group are those employed in scraping free the particles of TNT adhering to the threads in the orifice of the filled shell and thereafter engaged in shellacking the TNT cavity by means of a long-barrel air-pressure pistol that sprays on the shellac. This is a departmental process that liberates a great amount of TNT fume, a medium amount of TNT dust, and a considerable amount of tiny TNT crystals. About 30 per cent of all the TNT process workers are employed in this department. In the

plant studied, the charge-shellacking department, operating under improved methods, had a yearly risk rate of 17 cases of TNT poisoning for every 100 jobs. This implied a risk about half as great as in the boring or in the cooling department and about one-fourth as great as in the melting and pouring department.

The TNT risk rate for all the other production departments combined was 3 TNT cases in every 100 jobs during a year.

Conditions at every shell-loading plant should be so amended that the risk rates just cited as obtaining in the TNT departments under improved conditions should not be exceeded and, wherever possible, should be lessened.

The earlier risk rates, and these were under conditions better than at most loading plants, were: In the melting and pouring department 84 as against the improved-period rate of 64; in the cooling department 81 as against 33; in the boring department 131 as against 33; in the charge-shellacking department 125 as against 17; in the non-TNT departments 8 as against 3.

The improved conditions included operations under further perfected sanitary conditions, with dust and fume removal by means of vacuum devices, the reduction of work periods to eight-hour shifts, a 30 per cent increase in pay and a reduction of 24 per cent in the actual number of workers employed, a materially larger plant output and at a reduced cost rate, and a lessening of the TNT risk 24 per cent in the melting and pouring department, 60 per cent in the cooling department, 75 per cent in the boring department, and 86 per cent in the charge-shellacking department, with an accompanying reduction of 78 per cent in the TNT risk rate for all the other production departments combined.

In four of the five instances cited the risk rate was reduced between 60 and 86 per cent. In the melting and pouring department it appears to have been reduced only 24 per cent. This very fact may reveal a condition of great importance in a study of the manner in which TNT poisoning affects the worker. The melting department is where TNT escapes mostly in vapor. In that department, in addition to pouring molten TNT into shells, a few of the workers are also occasionally employed in melting imperfect TNT charges out of shells rejected by scrutinizing inspectors. But during the improved period at this plant the melting department also melted the TNT charges out of 250,000 shells that had been unsatisfactorily loaded by other companies.

What this means in TNT vapor liberation will appear. During those 20 months of operations this plant showed a generally uniform unrecovered waste of 2.31 per cent of all the TNT handled in

the various stages of the loading processes. Just how much of this escaped in vapor or in fume or in spattered particles of molten and then cooled TNT, or in unrecoverable dust, is not known, but it is known that during the melting out of those 250,000 charges 10 per cent of the TNT was not recovered and presumably was lost in vapor in the open-shed annex in which the work was performed.

During the first period, which lasted 7½ months, there were 340 jobs in the production departments, 503,020 shells were loaded, 20,121 pounds of TNT was somehow dispelled or wasted and lost, 115 cases of TNT poisoning occurred, the average daily output was about 2,000 complete rounds of cannon ammunition, and the greatest single day's output was 6,300 complete rounds.

During the improved period, which had continued 12½ months when this study terminated, there were 260 jobs in the production departments, 1,242,422 shells were loaded, 250,000 shells had their loads melted out, 49,697 pounds of TNT were dispelled or lost in the loading process, and 45,750 pounds of TNT escaped in the melting-out processes, 54 cases of TNT poisoning occurred, the average daily output was about 4,000 complete rounds of cannon ammunition, and the greatest single day's output was 10,256 complete rounds.

CLIMATIC HANDICAPS IN MUNITION DISTRICT.

Climatic conditions seem to have significance in TNT liability. How much they affect the process work and how much the resisting power of the worker exposed to unusual weather conditions while in transit to and from work remain to be determined.

But because the plant studied happens to be practically at the heart of the district where TNT is used in loading shells it is a matter of special interest to know just what are the variable climatic conditions under which practically all such work will have to be performed during America's manufacture of high-explosive shells.

Charts are given at the end of this article showing both periods of operation, the maximum and the minimum temperature each day of the 20 months, the measurable rainfall and the snowfall or the trace of either occurring any day, and, in encircled figures, the number of TNT poisoning cases occurring on the days indicated.

Health and comfort for the workers and productive efficiency for the whole shell-loading industry may be better planned when it is known that those who go into this necessary work, either men or women, or both, will have to work in a zone that had 120 frigid days in the year ending in September, 1917, 12 of them when the temperature ranged from 10° F. to a little below zero. During this year there were 80 hot and humid days when the temperature mounted

above 80°, 12 of the days having temperatures between 90° and 98° in the shade and two degrees hotter in the TNT departments. Rain fell 120 days, more than one-third of those days in hot weather, and the total rainfall for the year measured 50 inches. The total depth of snowfall during the year was 52 inches, and there was snow on the ground about 40 days.

Most of the shell-loading plants are in unattractive and comparatively isolated neighborhoods, poorly supplied with habitable quarters, and there is usually long daily transit to and from work, in dirty or cold or poorly ventilated and overcrowded vehicles. Rents are unwarrantably high because of the unfounded belief that munition workers are paid fabulous wages. At the loading plant studied the maximum pay for workers in the TNT departments rose to $3.25 to $4 a day, which was about double the amount similar manual labor had been paid in that neighborhood before the war.

In order steadily to produce the enormous number of high-explosive shells needed these munition-zone problems must be better understood, and it is especially necessary, if women have to go into this industry, that general conditions be improved.

Look carefully at the charts. The frigid periods are diagonally crossmarked with parallel lines and framed by heavy dark lines. The hot and humid periods are perpendicularly crossmarked and framed by wavy lines.

For example, note the last column of the first chart and trace across from the first column opposite the ninth day of the month. It shows that September 9 had a maximum temperature of 77°, a minimum temperature of 62°, a rainfall of 0.08 of an inch, and 22 cases of TNT poisoning occurring that day. It was not a hot day, but it was preceded by a very hot day with rain, indicating much humidity, and for 10 days preceding that unusual outbreak of TNT poisoning there had been continuous hot and humid weather. Incidentally it should be known that September 9 was a Saturday immediately following one of the plant's usual semimonthly Friday pay days.

Look further down on the chart of the later period and opposite the caption "Shell output per poison case." The amounts given to the right show the relative number of shells loaded any one month to each case of TNT poisoning developed. In October there were 95,000 shell loadings but no case of TNT poisoning. The poison risk during that fine-weather fall season was remarkably small; but the risk increased with the increase of winter rains. The monthly ratio was about 30,000 loadings to each poisoning in January and February, with a poorer showing in March. That was a time when the plant was working on two different contracts for shells of pre-

cisely the same character and only distinguished by tiny differences. It was a period of much confusion and crowding. It may be that these annoying conditions reacted upon the workers to an extent that the worry affected their physical state.

Some of the biggest output days occurred when the product was moving smoothly along through the departments and workers could be heard occasionally singing snatches of song. Possibly one of the causes for the large risk rate in the melting and pouring department was the presence there for many months of a diminutive foreman of the military martinet type, skilled in TNT and energetic and educated, but possessed of a most remarkable aptitude for insulting and irritating workmen, and to such an extent that his personality was responsible for many men's quitting or refusing to work in that department.

In April and May of the second period there were altogether eight cases of TNT poisoning. Five of those eight cases occurred in the melting and pouring department, and it was during those two months that 225,000 loads were melted out of shells.

This article might now be concluded with a summary of general recommendations thought advisable for adoption by all the shell-loading plants, but enough has been suggested in the general treatment of the subject of TNT poisoning to show that it is a great industrial and medical problem, and that involved with the possible saving of several hundred lives is the possible saving for the Government of some $4,000,000 in TNT values.

Following are the charts mentioned above, showing weather conditions for each day during 20 months at the shell-loading plant studied. This establishment is located in the heart of the munition district and is considered one of the safest plants engaged in handling high explosives in the United States.

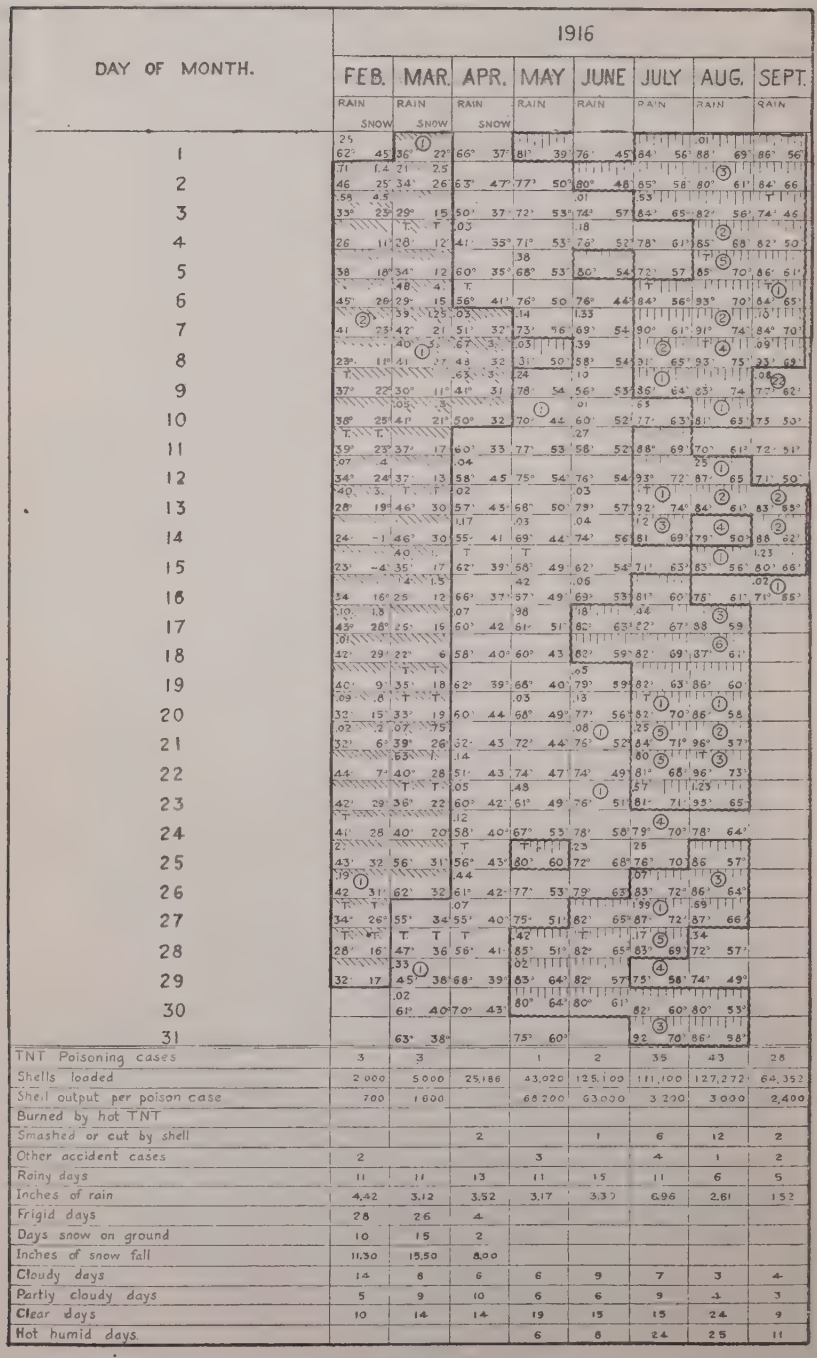
In explanation of the charts it may be stated that chart No. 1 covers the first 7½ months of the period under consideration, during which the employees worked 10-hour shifts. Many health-protective devices were used during this period and labor fluctuated greatly. The second chart represents 12½ months of improved conditions, with 8-hour shifts. Maximum and minimum temperature are indicated by the lower figures in each daily square, while the upper figures show the inches of snowfall or rainfall, those on the left showing rain and those on the right, snow. A trace of snow or rain is represented by a T.[1] Frigid periods—that is, periods when the minimum tem-

[1] This record was compiled and arranged by Archie Rice, of New Brunswick, N. J. The snowfall measurements and other climatological data were taken from records made by the New Jersey State Agricultural College.

perature was 32 degrees or lower—are diagonally cross marked by parallel lines and surrounded by heavy black lines, and hot, humid periods are perpendicularly cross marked and surrounded by wavy lines. In the lower sections of the chart are summarized by months the number of cases of TNT poisoning, the total number of shells loaded, and the average for each case of poisoning, together with cases of burns and accidents, the number of frigid and of hot, humid days, and other weather conditions.

CHART 1.—TNT POISONING CASES AS RELATED TO WEATHER CONDITIONS DURING 7½ MONTHS IN A SHELL-LOADING PLANT WITH 10-HOUR SHIFTS.

[Upper left-hand figures in squares show inches of rain and right-hand figures inches of snowfall; T=trace; lower figures show maximum and minimum temperatures.]



	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
TNT Poisoning cases	3	3		1	2	35	43	28
Shells loaded	2 000	5 000	25,186	43,020	125,100	111,100	127,272	64,352
Shell output per poison case	700	1 600		68 200	63,000	3 220	3 000	2,400
Burned by hot TNT								
Smashed or cut by shell			2		1	6	12	2
Other accident cases	2			3		4	1	2
Rainy days	11	11	13	11	15	11	6	5
Inches of rain	4.42	3.12	3.52	3.17	3.30	6.96	2.61	1.52
Frigid days	28	26	4					
Days snow on ground	10	15	2					
Inches of snow fall	11.30	15.50	8.00					
Cloudy days	14	8	6	6	9	7	3	4
Partly cloudy days	5	9	10	6	6	9	4	3
Clear days	10	14	14	19	15	15	24	9
Hot humid days				6	6	24	25	11

CHART 2.—TNT POISONING CASES AS RELATED TO WEATHER CONDITIONS DURING 12½ MONTHS OF IMPROVED CONDITIONS, WITH 8-HOUR SHIFTS, IN THE SAME PLANT.

[Upper left-hand figures in squares show inches of rain and right-hand figures inches of snowfall; T=trace; lower figures show maximum and minimum temperatures.]

DAY OF MONTH.	1916				1917								
	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
	RAIN	RAIN	RAIN	RAIN SNOW	RAIN SNOW	RAIN SNOW	RAIN SNOW	RAIN SNOW	RAIN	RAIN	RAIN	RAIN	RAIN
1		62° 34°	.11 58° 48°	50° 33°	T. T. 34° 17°	43° 33°	.40° 25°	T. 83° 50°	.23 46° 42°	.10 69° 52°	87° 55°	97° 79°	.178 70° 64°
2		65° 40°	64° 39°	48° 36°	40° 30°	36° 13°	23 .82 30° 27°	76° 41°	.03 59° 39°	.02 72° 54°	.03 93° 61°	95° 74°	T 80° 64°
3		71° 38°	56° 45°	43° 27°	.21 (1) 47° 25°	T T 16° 4°	T. 55° 28°	(1) 55° 43°	58° 42°	81° 58°	.186 76° 63°	.31 85° 69°	(1) 78° 64°
4		68° 49°	54° 31°	61° 38°	45° 35°	36° 9°	.118 6 35° 28°	60° 35°	.07 55° 32°	77° 53°	.49 86° 65°	84° 62°	75° 55°
5		78° 43°	.09 43°	T (1) 64° 48°	.43 52° 35°	.20 2 37° 6°	.09 2 33° 30°	.04 57° 35°	.133 43° 39°	80° 48°	80° 66°	81° 61°	73° 49°
6		81° 59°	T (1) 37°	59° 38°	.01 53° 42°	26° 10°	.98 33° 32°	48° 33°	.09 48° 39°	.03 79° 62°	80° 65°	85° 58°	.06 74° 56°
7		73° 59°	30°	51° 35°	48° 25°	(1) 37° 16°	41° 17°	46° 38°	53° 41°	.75 73° 58°	(1) 79° 62°	86° 65°	.01 77° 50°
8		82° 47°	(2) 35°	(2) 45° 38°	(1) 44° 25°	48° 27°	.50 (1) 45° 31°	45° 30°	50° 39°	T 82° 61°	76° 62°	80° 62°	.128 64° 52°
9		T 86° 63°	T. 40°	.52 51° 34°	.05 47° 34°	.27 42° 22°	T 44° 29°	.30 .725 42° 24°	.02 58° 41°	T (2) 83° 58°	.12 74° 63°	T 55° 71°	70° 45°
10		74° 36°	38°	.50 50° 27°	.92 50° 31°	22° 9°	40° 28°	46° 24°	.12 55° 42°	.05 79° 62°	.30 67° 60°	(1) 60° 65°	63° 55°
11		62° 33°	36°	.20 (2) 38° 25°	47° 15°	23° 13°	.09 45° 31°	62° 33°	65° 41°	.14 72° 62°	.145 63° 59°	82° 56°	62° 36°
12		66° 37°	33°	.67 (1) .55 35° 32°	20° 7°	13° 3°	(1) 47° 37°	T. 60° 40°	.01 (1) 63° 41°	T 81° 63°	.03 73° 58°	84° 59°	69° 39°
13		.13 69° 44°	.09 (1) 47°	34° 21°	T T 40° 11°	23° -1°	44° 27°	.01 49° 36°	.04 58° 40°	72° 59°	.07 83° 63°	88° 60°	74° 44°
14		.11 75° 41°	40°	35° 18°	.63 T T. 54° 32°	T. 35° 17°	.18 .25 40° 30°	52° 30°	71° 46°	.167 87° 60°	.63 (1) 84° 63°	82° 60°	71° 45°
15		72° 32°	(2) 30°	9. 9.5 28° 18°	.22 .375 35° 17°	36° 19°	.04 49° 32°	49° 29°	66° 47°	.02 70° 59°	.122 81° 65°	82° 64°	.26 65° 56°
16		.01 65° 53°	T. T. 25°	.20 (1) 2. 25° 10°	T. T. 28° 18°	.15 .125 34° 19°	(1) 49° 31°	53° 33°	T. (2) 60° 39°	T 70° 57°	T 87° 65°	.02 84° 67°	64° 53°
17	70° 47°	65° 50°	27°	24° 12°	29° 13°	42° 16°	.49 47° 32°	63° 31°	68° 44°	73° 52°	87° 66°	.01 87° 64°	68° 46°
18	75° 46°	53° 32°	33°	26° 11°	T T 38° 26°	49° 31°	T. 44° 32°	73° 36°	.20 76° 41°	80° 51°	.29 81° 69°	83° 60°	78° 51°
19	.39 66° 43°	1.13 67° 45°	28°	26° 18°	34° 24°	46° 24°	37° 18°	T 69° 47°	76° 58°	85° 59°	T 79° 70°	86° 57°	81° 56°
20	75° 41°	80° 66°	34°	(1) 34° 10°	41° 15°	.11 T 42° 28°	(1) 54° 20°	.04 63° 45°	86° 50°	84° 60°	T 84° 67°	86° 61°	82° 52°
21	71° 45°	70° 49°	(1) 27°	.57 T. 59° 27°	.18 .175 32° 26°	41° 24°	.17 (2) 54° 35°	.08 (2) 76° 46°	77° 51°	85° 60°	85° 70°	.64 90° 65°	80° 52°
22	77° 51°	55° 37°	19°	.222 (1) 39° 29°	T T 49° 28°	.29 .825 44° 25°	T. 52° 32°	.71 71° 50°	68° 47°	86° 59°	86° 67°	.03 79° 66°	70° 47°
23	.01 78° 61°	55° 38°	.49 (1) 28°	(2) 35° 21°	34° 18°	T. 46° 18°	54° 30°	.08 79° 43°	T 63° 48°	86° 64°	88° 68°	77° 67°	62° 42°
24	78° 49°	62° 36°	.59 40°	33° 29°	35° 19°	.37 50° 37°	.42 57° 42°	64° 45°	(1) 63° 40°	.15 85° 65°	87° 69°	.18 (1) 89° 72°	60° 47°
25	64° 47°	T. 62° 34°	27°	39° 30°	.06 (1) .50 39° 22°	(1) 36° 20°	56° 31°	54° 35°	T 62° 46°	81° 56°	83° 71°	.07 85° 66°	72° 54°
26	74° 41°	58° 46°	21°	33° 20°	T (1) T 32° 16°	54° 21°	59° 32°	.23 (1) 46° 39°	73° 44°	79° 58°	.54 85° 77°	77° 49°	77° 50°
27	84° 53°	53° 31°	(1) 29°	.31 33° 24°	26° 12°	.03 56° 42°	.37 56° 43°	.02 55° 41°	79° 54°	.35 84° 65°	.55 88° 73°	87° 56°	76° 50°
28	83° 61°	56° 37°	48° 27°	.50 36° 32°	.15 .150 42° 25°	.31 (1) .4 46° 29°	.14 54° 34°	56° 41°	.89 64° 49°	(1) 81° 66°	(1) 83° 64°	85° 58°	.21 74° 59°
29	.58 80° 54°	56° 34°	T. 68° 34°	(1) 37° 24°	1.09 40° 24°		T. (2) 54° 38°	62° 40°	.50 60° 48°	.06 85° 64°	81° 60°	.04 89° 65°	72° 49°
30	.03 57° 45°	60° 51°	.58 57° 49°	38° 15°	.17 (1) 47° 35°		54° 34°	T. 49° 44°	76° 47°	.28 80° 56°	95° 72°	.18 79° 68°	.03 68° 47°
31		64° 53°		30° 16°	T 42° 30°		T. 69° 32°		? ?		98° 79°	74° 63°	
TNT Poisoning cases			9	12	5	3	8	4	4	3	3	2	1
Time lost	42 944	95 804	152,040	121 540	149 872	94 972	168,272	144,836	115,480	93 164	50,630	4,267	8 601
Shell output per poison case			17,000	10,100	30,000	32,000	21,000	36,000	29,000	31,000	16,900	2,100	8,600
Burned by hot TNT				2	2			1		1	1		
Smashed or cut by shell							1	1		1			
Other accident cases			1	4			1		3				1
Rainy days	4	4	6	11	12	8	12	10	17	12	12	9	7
Inches of rain	1.01	1.38	1.95	14.00	2.20	1.77	3.87	2.99	3.87	3.62	6.97	.87	3.63
Frosty days		3	13	23	26	25	24	8	1				
Days snow on ground				7	4	7	4	1					
Inches of snow fall				9.50	7.50	10.50	11.07	7.25					
Cloudy days	2	3	10	10	14		10	7	10	4	7	3	6
Partly cloudy days	3	8	1	11	5	9	9	10	8	8	5	11	7
Clear days	9	20	19	10	12	11	12	13	13	18	19	17	17
Hot humid days	3	4						1	1	18	24	26	4

DOPE POISONING IN THE MAKING OF AIRPLANES.

BY ALICE HAMILTON, M. D.

INTRODUCTION.

For the most part the manufacture of airplanes is quite devoid of risk to the health of the workers, consisting as it does of carpentry, upholstering, varnishing, and metal work. There is only one point at which poisons are encountered and that is when the substance called "dope" is applied to the linen which covers the body, wings, rudder, etc. The purpose of the dope is to tighten the fabric so that it is absolutely smooth fitting and to render it waterproof. A good dope must be flexible and durable and must possess the property of making the fabric taut.

A great many varieties of dope have been used for this purpose and even now new ones are brought forward from time to time and tested, so that it is probable that formulas now in use may be changed within a short time. Any description of the doping of airplanes applies necessarily only to the present time, and it must be understood that the compounds used may be different six months from now. At present the base for dopes is almost always a cellulose compound, either the acetate or the nitrate. Neither of these is at all poisonous, but both must be dissolved in various volatile compounds which are more or less poisonous, exerting their action on the central nervous system or on liver, kidneys, and heart muscle, or on the constituents of the blood. These compounds will be described in detail later.

It was during the year before the war that physicians first heard of industrial poisoning in connection with airplane doping through reports in German medical journals. A new and startling form of poisoning had appeared in certain of the Johannisthal airplane works and some of the cases were fatal. Soon after the appearance of these reports, similar cases were published in British medical journals. Dope poisoning continued to be reported from both countries up to the early months of 1915, when information from German sources ceased. The British reports, however, appeared from time to time up to January, 1917, at which time the use of that particular form of dope was largely discontinued in England.

The form of poisoning described by the British and German physicians and physiologists, who made their observations quite independently, was the same in both countries. It consists in an acute degeneration of the liver with lesions in kidneys and heart muscle. In England it is known as toxic jaundice and in symptoms and pathology it is very like the toxic jaundice caused by trinitrotoluol poisoning. All of the early cases of dope poisoning were cases of toxic jaundice, but later, when medical examinations were made of all the dopers in order to detect the early stages of poisoning, it was found that there are other less serious and striking types of dope poisoning, characterized chiefly by nervous disturbances.

Although the airplane industry in the United States has been expanding greatly since the beginning of the war, no case of dope poisoning has come to the knowledge of the medical profession. It is of course possible that scattered cases may have occurred and failed to be recognized or reported, and it is also possible that the American dopers have so far escaped poisoning because they did not work long or continuously or in an atmosphere heavily charged with fumes. It may be that as the number of men engaged in doping increases and their work grows more continuous, instances of dope poisoning may appear as they did in Germany and England, unless at the outset precautions are taken to prevent such an occurrence. For these reasons, the Bureau of Labor Statistics instituted an inquiry into the work of doping airplanes as it was done during the spring and summer of 1917, in order to discover what kinds of dope were used, what precautions taken, and whether there was any evidence of dope poisoning in American airplane works.

In the course of this inquiry 18 factories were visited, situated in Illinois, Michigan, Ohio, Florida, New York, New Jersey, Rhode Island, and Massachusetts. The greater number of these were small, some of them only experimental, and they employed no more than one man each in doping and usually for only part time. A few employed as many as 10 dopers. The industry was in process of rapid expansion and hardly any of the plants were at that time in permanent quarters; all were planning to enlarge if their expectations as to Government contracts were fulfilled. This means that the conditions found during the spring and summer of 1917 were temporary and in most cases have already changed. It is fair to say that at that time the doping rooms were passably ventilated, considering the amount of work that was being done, but in many instances the ventilation provided would not be sufficient if doping were continuous and a dangerous kind of dope were used.

The men in charge of these works all realized that there are risks involved in doping, but few of them knew which kind of dope is

the most dangerous, and most of them were willing to trust to natural ventilation to carry off the fumes. As the visits to these plants were made during mild weather, when the windows could be opened, conditions were at their best. No doping room was seen so small and crowded and close as to make one fear for serious poisoning among the dopers, but in cold weather and during a rush of work the state of things would be very different.

Before describing the factories visited it will be best to discuss the various dopes in use in this country, for, obviously, much more scrupulous care must be taken with a decidedly poisonous dope than is necessary with one less poisonous.

DESCRIPTION OF AIRPLANE DOPES.

There are at present three kinds of dope in use for airplanes. The first is the one which was in general use before the war, cellulose acetate dissolved in a mixture of solvents, the most important compound of which is tetrachlorethane. This dope has the advantage of being relatively noninflammable and therefore adapted for use on war planes. The second is acetate of cellulose dissolved in a mixture which does not contain tetrachlorethane, but consists of acetone, alcohol, and benzol. The third is cellulose nitrate dissolved in amyl acetate with usually acetone, or other ketones, alcohols, and benzol. Cellulose nitrate is inflammable and the surface doped with it must be covered with a noninflammable varnish, but even so, nitrate dopes are not considered appropriate for war planes, though they are very generally used for training planes.

These solvents differ very much in their poisonous properties for human beings, but all, with the possible exception of acetone, come under the head of volatile poisons, which produce their effect when breathed or when absorbed through the skin, as well as when swallowed.

PHYSIOLOGICAL EFFECTS OF DOPE SOLVENTS.

TETRACHLORETHANE ($C_2H_2CL_4$).

K. B. Lehmann,[1] probably the greatest expert on volatile industrial poisons, determined by experiment the actual toxicity of this compound, several years before general attention had been called to it by poisoning in the aircraft industry. In 1911 he administered tetrachlorethane to cats, through the skin and by inhalation, and found that it set up serious disturbances of metabolism, with decided loss of weight. Bile coloring matter and albumen appeared in the urine, and sometimes hemoglobin. There was solution of red blood cor-

[1] Lehmann, K. B., Archiv. für Hygiene, 1911, vol. 74.

puscles and basophilic granulation; fatty infiltration and degeneration of the liver; the heart muscle was yellowish; the kidneys congested. Minute hemorrhages took place into mucous and serous tissues.

Lehmann found that if there was not more than 1 to 2 milligrams of the vapor to a liter of air, the cats could breathe it for a relatively long period—six or seven hours a day for 18 days spaced over four weeks—and show no more serious symptom than loss of weight and drowsiness. If the strength of the fumes was increased, the symptoms were like those following chloroform inhalation, only it is more toxic than chloroform. Tetrachlorethane is the most poisonous of the chlorine derivatives of the hydrocarbons, being four times as toxic as chloroform and nine times as much so as carbon tetrachloride (tetrachlormethane).

In December, 1913, in an airplane factory in Johannisthal,[1] four out of a force of eight dopers were affected with hematogenous jaundice of a severe type and one died. The dope was applied to the wings by spraying as well as by painting and the work was done in a poorly ventilated room. The formula of the dope was secret, but analyses carried on in the University of Berlin showed it to consist of acetate of cellulose in a solvent containing 60 per cent of tetrachlorethane.

Heffter and Joachimoglu,[2] of the Pharmacological Institute of the University of Berlin, made experiments on dogs, using two commercial dopes, "Aviatol," which contained as much as 84 per cent of tetrachlorethane, and "Quittner's Emaillite B," also a tetrachlorethane mixture, and then pure tetrachlorethane. They administered the compounds by rubbing into the skin and by exposing the animals to the vapors. From dopes and from the pure substance they obtained the same results, namely, loss of weight, vomiting, bile and blood in the urine, death with fatty degeneration of the liver and hemorrhages into serous and mucous surfaces and into the heart muscle. When inhalation experiments were made, there was, at the beginning, a narcosis, slower in onset and less marked and less lasting as the days went on, the animal gradually becoming somewhat accustomed to the effects. After several days of inhalation, the other symptoms described above appeared and the course of the case and the changes found after death were the same no matter how the poison was administered.

The fatty degeneration of the liver found after such experiments is more marked than that produced by any substance except phosphorus and it resembles that of phosphorus poisoning by being asso-

[1] Jungfer, Zentralblatt für Gewerbehygiene, 1914, vol. 2, p. 222.

[2] Grimm, Heffter and Joachimoglu Vierteljahresschrift für gerichtliche Medizine, 3 Folge, 1914, vol. 48, Supplementheft, p. 192.

ciated with a yellow, flabby heart muscle and with acute degenerative change in the kidneys. There is also a striking resemblance to delayed chloroform poisoning, in which acute hematogenous jaundice is found. Tetrachlorethane has more than seven times the blood-dissolving power—for mammalian blood—than chloroform has.

During 1914 several instances of poisoning among dopers in airplane works were reported in German medical literature. Jungfer[1] told of one factory where 10 men were poisoned and 1 died. This man had worked only two months, with a dope containing 40 per cent tetrachlorethane. Some months later Grimm[2] wrote of a factory with 15 dopers, all but one of whom had suffered from the effects of the dope and the one who had escaped had been at work only four weeks. Two had died. They were using Aviatol and Emaillite.

Grimm gives the details concerning 18 cases of dope poisoning, with two deaths, the symptoms being as follows: Gastric disturbances—nausea, inclination to vomit, tenderness over the stomach—16; jaundice, 8; bile in urine, 9; anemia—hemoglobin from 60 per cent to 80 per cent—5; muscle tremors, 5; numbness, 3; abnormal reflexes, 4; nephritis, 2; slight motor paralyses, 3; heart weakness, 1. Those who had nervous symptoms had no gastrointestinal symptoms. The dopes contained 40 per cent, 60 per cent, and 84 per cent tetrachlorethane.

He says that after these distressing occurrences, two Johannisthal plants gave up the use of these dopes, but even so, four months later one of the workmen developed toxic jaundice. This long latency and the delayed development of the symptoms of poisoning have also been noted in connection with trinitrotoluol poisoning, as described in the discussion by the British Royal Medical Society.[3] Men and women who had been away from the TNT works for weeks or months have had typical toxic jaundice, which in one case was fatal.

Koelsch,[4] writing in 1915, divides cases of tetrachlorethane poisoning into two groups, (*a*) those with pronounced gastrointestinal symptoms, nausea, vomiting, abdominal cramps, enlarged liver, and jaundice; (*b*) those with slight abdominal symptoms or perhaps none, but with nervous disturbances of various kinds, headache, paresthesia, trembling hands, reflex disturbances, slight paralyses. He speaks of two cases belonging to the first group that were mistaken for lead colic. He also mentions as a symptom an increased

[1] Jungfer, Zentralblatt für Gewerbehygiene, 1914, vol. 2, p. 222.

[2] Grimm, Heffter and Joachimoglu, Vierteljahresschrift für gerichtliche Medizine, 3 Folge, 1914, vol. 48, Supplementheft, p. 192.

[3] See MONTHLY REVIEW of U. S. Bureau of Labor Statistics, August, 1917, pp. 63–74.

[4] Koelschen, Münchner medizinische Wochenschrift, 1915, vol. 62, p. 1567.

appetite for food, coincident with a loss in weight. One of his cases belonging to the second group had only slight gastric symptoms, pain in the stomach and slightly yellowish skin. His chief complaint was of drowsiness persisting all the time he was at work, feeling of crawling in the throat, tremors of the hands, and various neurasthenic symptoms. One employer had used amylacetate dope at first but his men complained that it made them cough and their eyes smart and water, so he had substituted tetrachlorethane and after four weeks one of them developed acute inflammation of the liver.

The use of tetrachlorethane was forbidden in the Tetlow department (Kreis) temporarily by order of the factory inspection department till the effects could be more closely studied.

This report of Koelsch's cases in 1915 is the last that has come to us from Germany. At that time the factory inspectors and sanitarians were strongly in favor of prohibiting the use of tetrachlorethane dopes. We do not know whether this was done. If it was not, then the enormous expansion of the aircraft manufacture of Germany during the last two years must have been attended with a great deal of industrial poisoning.

Great Britain's experience has been very similar; but in her case we have been able to follow it to its logical end, the abandonment of tetrachlorethane dopes. The first report of poisoning from this substance in the airplane industry was in October, 1914, when a man died of acute jaundice in an airplane factory in Hendon. He was 36 years old and had worked 11 weeks when he was found to have jaundice and an enlarged liver. Three weeks later he died and the liver was found to be shrunken and green. Inquiry revealed 10 more cases of inflammation of the liver in the same plant, all men. Their ages were between 23 and 58 years, with four of them over 45 years. The shortest period of exposure before illness came on was three weeks, the longest, 16 weeks. All these cases were of the gastric type and all had jaundice. Indeed at that time no other type of dope poisoning would have been recognized.

Dr. T. M. Legge, chief medical inspector of factories, suggested that the dope was probably responsible for the illness, and experiments made on animals showed that the poisonous constituent of the dope was tetrachlorethane, capable of producing degeneration of liver and kidneys.

The second fatal case in England was a girl of 19 years, who died with all the symptoms of acute yellow atrophy of the liver. She began work in August, was jaundiced in December, and died January 2. The third, a girl of 17, had a similar history. She had worked four months. The fourth was a woman of 34 years who had been

working overtime, through the fall months. She began to feel sick in December, became jaundiced, and died in coma the first day of the year. The fifth death, reported early in 1916, was that of a man of 60 years, employed in taping, who died 13 days after he first consulted a doctor, complaining of diarrhea, vomiting, and great prostration. He had worked barely three weeks.

In February, 1916, "toxic jaundice" was made a notifiable disease in Great Britain, and "dope poisoning" was brought under the workmen's compensation act. It was stated by the Home Office then that 43 cases were known to have occurred, and seven deaths, five of them of women. The report for that month warns of the dangers to tapers, who do not use a great quantity of dope, but whose faces must be near it all the time, because the work is fine. No near-sighted person should be employed in taping. At least three deaths have occurred among tapers.

The dopes in use in Great Britain were made with cellulose acetate, dissolved in benzol, acetone, methyl alcohol, and tetrachlorethane. Wilcox,[1] senior scientific analyst to the Home Office, exposed rats to the vapor of all four of these substances. Those that were in the vapor from dope reacted in the same way as those in tetrachlorethane vapor. They grew drowsy and slept all day, not reviving entirely when taken out at the end of eight hours. After a week of this treatment they were drowsy and could not coordinate their movements, but revived later and ate normally. They did not, however, gain in weight. The rats kept in acetone vapor, and those in methyl alcohol and those in benzol, were also drowsy, but they would revive quickly each day, feed well, and gain weight, nor did they show any incoordination of muscles. All were finally killed, and while the last three groups showed no organic lesions, those exposed to tetrachlorethane vapor had fatty degeneration of the liver and kidneys. The animals which had breathed dope vapor showed the same changes, only less marked. Other rats exposed to the vapor for as long as five weeks showed decided shrinking of the liver. These experiments, as did the similar ones in Germany, established the fact that it was tetrachlorethane in dope that was responsible for this new form of industrial poisoning.[2]

Tetrachlorethane dopes continued to be used in Great Britain, but under far better conditions than formerly, for the Home Office insisted on more ample ventilation, to be provided by means of down

[1] Wilcox, in Lancet (London), 1915, vol. 1, p. 544.

[2] Wilcox gives as the distinctive features of this form of hematogenous jaundice in man: A slow, insidious onset; long duration of the disease after the onset, longer than in acute yellow atrophy of the liver; the absence of marked fever, distinguishing it from infectious jaundice, Weil's disease; the absence of such anemia as would be found in arsenical poisoning. The jaundice is deeper than that which accompanies delayed chloroform poisoning.

suction, since the vapors of tetrachlorethane are heavier than air. The Home Office inspectors found that a plenum system of ventilation simply resulted in a wide distribution of the poisonous fumes, so that workmen who were not employed in doping were forced to breathe dope fumes. They insisted that the air in the doping room must be changed 30 times an hour, and that all work, except doping, must be excluded from the doping room, and that doping of all kinds, including taping, must be done in this room. According to their observations as small an amount as 10 or 12 per cent of tetrachlorethane in dope is dangerous.

In August, 1916, a member of the Government stated in Parliament, in response to a question, that: "Considerable progress has been made in the production of satisfactory dopes of a nonpoisonous kind, and the Admiralty and War Office have recently issued instructions to contractors specifying various nonpoisonous dopes which meet their requirements. The effect of these instructions is that the use of dope containing tetrachlorethane is no longer permitted for military or naval air service unless nonpoisonous dopes can not be obtained. Of eight doping schemes approved seven are now supplied by the trade."

The latest information from England, in a letter from Dr. T. M. Legge, chief medical inspector of factories, written January 10, 1917, is to the effect that tetrachlorethane dope has been eliminated in aircraft works, and there has been little or no trouble among dopers since then. The Home Office, however, still thinks it necessary to insist on the same forms of artificial ventilation in doping rooms and on the fortnightly medical examination of dopers, inasmuch as the new dopes contain volatile poisons, though not as dangerous as tetrachlorethane.

The best solvent for cellulose acetate, if tetrachlorethane can not be used, is a mixture of methyl acetone (or methyl alcohol, methyl acetate, and acetone), benzol, and alcohol. By far the most toxic compound in such a dope is the benzol.

BENZENE OR BENZOL (C_6H_6).

This solvent, a coal-tar product, is a more powerful poison to the central nervous system than any substance used in airplane dope. Very rapidly fatal cases of industrial benzol poisoning have been reported in the literature, showing that a few minutes' exposure to heavy fumes may mean death. Less dense benzol fumes cause dizziness; roaring in the ears; excitement like that of alcoholic intoxication, sometimes angry, sometimes foolish, followed by the same depression and discomfort that come after a bout of drinking.

The amount of benzol in airplane dope is not likely to be more than 12 or 15 per cent, and we would not therefore expect severe

acute poisoning from its use. The milder forms of acute poisoning just described would be more probable and perhaps also the symptoms of chronic benzol poisoning, such as is seen among rubber workers. This chronic poisoning causes disturbed digestion, loss of weight, loss of appetite, tendency to fatigue after slight exertion, vague nervous symptoms, weakness, lowered resistance to infectious diseases. It is probable that the underlying disturbance is a profound anemia, for it is characteristic of benzol that it has a destructive action on the constituents of the blood, both the red corpuscles and the white. It also injures the blood vessels and in severe cases of both acute and chronic poisoning there may be hemorrhages under the skin or from mucous surfaces.

Industrial poisoning occurring among the users of cellulose acetate dope which has no tetrachlorethane might be due to other solvents in the dope, but the presence of benzol must always be taken into consideration, for it is the most dangerous of the solvents used.

ACETONE: OR DIMETHYL KETONE ($CO(CH_3)_2$).

This is the principal solvent used in these cellulose acetate dopes. It may be present as chemically pure dimethyl ketone, or as the so-called methyl acetone, a mixture of methyl alcohol, methyl acetate, and acetone.

Pure acetone is probably the least harmful compound used in dope solvents. Koelsch[1] could find no proof of danger in the use of acetone in industrial processes, no effect upon the workmen except possibly burning of the eyes and headache. Kobert,[2] the great authority on poisons, says that no case of acute poisoning from acetone, either deliberately or accidentally absorbed, is on record and he believes that such an occurrence is hardly possible. My own experience has been with men using acetone in the making of certain kinds of smokeless powder. They look upon it as completely harmless, not one of them attributing to its use any disturbance of health. In one factory I was told that they often used acetone to wash out a foreign particle from the eye, and in another, the factory physician told me that he took acetone for dressing minor injuries when his iodine gave out and found it a good substitute.

METHYL ALCOHOL OR WOOD ALCOHOL (CH_3HO).

In single large doses methyl alcohol is less poisonous than ethyl (grain) alcohol, but in small repeated doses it is decidedly more poisonous.[3]

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[1] Koelsch, Concordia, 1912, vol. 19, p. 246.
[2] Kobert: Die Intoxikationen, p. 95.
[3] Nicloux and Placet, Comptes rendus de la Société de Biologie, 1912, vol. 2, p. 63.

It is often claimed by industrial users of wood alcohol that the i effects following the breathing of fumes are caused by the impuritie contained in commercial wood alcohol, and that the pure alcohol i harmless, but this has been conclusively disproved by Reid Hunt who found the chemically pure article producing all the character istic symptoms of wood alcohol poisoning.

Pohl [2] says that the chronic poisoning of wood alcohol is quit different from that of the other alcohols. Ethyl, butyl, and amy alcohol may be tolerated by animals for months, but methyl alcoh given in repeated doses can be tolerated only a few weeks. The ani mals cease to feed, then they fall into a coma lasting for days, an finally die, the liver having undergone extensive fatty degeneration

In human beings the most striking effect of wood alcohol is on th eye. Lewin [3] says that this action on the eye is more characteristi and occurs with greater certainty than does the effect of almost an other poison, and this is true whether the alcohol be swallowed o breathed. There is often a conjunctivitis, which may later be puru lent; the pupil dilates and does not react to light or to accommoda tion; the sight is blurred; the field of vision decidedly contracted especially for certain colors. Ophthalmoscopic examination show distension of the retinal vessels with dark blood, blurring of th disk, in severe cases marked retinitis with edema.

The clouded vision comes on suddenly and may pass away in th open air, returning again in the atmosphere of the work-room. Exposure to heavy fumes is sometimes followed by permanent impairment of sight, even total blindness. There are many cases of industrial poisoning from wood alcohol reported in American medical literature that resulted in partial or complete blindness or in death.[4]

Accompanying the eye symptoms there is usually more or less headache, a feeling of weariness and of muscular weakness, pain in stomach and back, dizziness. If the fumes are heavy, the symptoms are more serious—abdominal cramps, nausea and vomiting, chills, uncontrollable drowsiness, even coma. Delirium is rare. In ordinary wood alcohol poisoning fainting does not occur, but there is dizziness, confusion, roaring in the ears, blurred sight, staggering gait. Occasionally the fumes cause bronchial irritation, even bronchopneumonia.

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[1] Reid Hunt, Johns Hopkins Hospital Bulletin, 1902, vol. 12, No. 137.

[2] Pohl, Archiv. für experimentale Pathologie und Pharmakologie, 1893, vol. 31, p. 281.

[3] Lewin, Medizinische Klinik, Berlin, 1912, vol. 8, p. 95.

[4] For full literature on the subject of industrial wood alcohol poisoning, see the following:

Wood, Casey, and Buller, F., Journal American Medical Association, 1904, p. 992.

Wood, Casey, Journal American Medical Association, 1912, p. 1912.

Woods, Hiram, Journal American Medical Association, 1913, p. 1762.

Tyson, H. H., and Schoenberg, M. J., Journal American Medical Association, 1914, p. 915.

It is an unsettled question what proportion of wood alcohol constitutes a dangerous amount. Denatured alcohol in the United States usually contains from 4 to 10 per cent of wood alcohol and it is generally assumed that this is within the poison limits. Yet the denatured alcohol of Germany which contains only 2 per cent has caused trouble among the workers using it. According to Goldschmidt[1] there has been a great deal of complaint of ill health among workmen using denatured alcohol, so much so that petitions were sent to both the Bundesrath and the Reichstag, asking for a governmental inquiry into the harmfulness of alcohol denatured in this way. Lewy,[2] writing in 1891, gives much the same information concerning the use of denatured alcohol in industry in Austria. The Austrian formula for this alcohol calls for the addition of 2 per cent wood alcohol and one-half per cent pyridin bases.

Lewy states that the reports of sickness caused by the use of this denatured alcohol in industrial establishments in Bohemia induced the Austrian Ministry of the Interior to undertake an inquiry, the results of which confirmed the reports of ill health and blindness following work with denatured alcohol. The poisonousness of the pyridin bases and of the impurities contained in crude wood alcohol are admitted, but the effect of methyl alcohol itself is said to be predominant and to be regarded as the principal effect. In Germany and in Austria, countries in which the industrial use of denatured alcohol is very widespread, mixtures containing as little as 2 per cent of wood alcohol have been found to be dangerous.

These are the principal substances that make up the solvents for cellulose acetate when tetrachlorethane is not used. Small quantities of other compounds may be added to act as stabilizers for the dope. For instance, from 2 to 5 per cent of ethylchloracetate (CH_2 Cl COO C_2 H_5) is said to have this stabilizing effect. Ethylchloracetate has a markedly irritating action on the eyes. Other compounds which may be used for this purpose are benzyl acetate, benzyl benzoate, and acetanilid, none of which would probably be harmful when used in this way. Hexachlorethane, said to be far less poisonous than the tetra compound, is sometimes used, and also paradichlorbenzol. This last is decidedly irritating to the skin, but it is doubtful whether so small an amount as 4 per cent would do any harm.

Coming now to the cellulose nitrate dopes, which are commonly used for training airplanes, we find that the solvent that bears the same relation to cellulose nitrate as tetrachlorethane does to cellulose acetate is amylacetate, commonly called banana oil. Combined with it may be acetone, amyl alcohol (the so-called fusel oil), methyl

[1] Goldschmidt, Weyl's Handbuch der Hygiene, vol. 8, p. 830.
[2] Lewy, Medizinisch-chirurgische, Rundschau, 1891, vol. 32, p. 508.

alcohol, grain alcohol, and benzol. Of these, acetone, methyl alcoh and benzol have already been described.

AMYL ACETATE ($C_7H_{14}O_2$).

Amyl acetate is familiar to varnishers and workers in shellac ar lacquers under the name of banana oil. Many men object very muc to its heavy, sweet odor, and irritating effect on eyes and throat. is probably because of this penetratingly sweet odor that the me attribute any unpleasant effects they may experience in the use c cellulose nitrate dopes to the banana oil, though there may be muc stronger volatile poisons present, such as benzol or methyl alcoh their presence being masked or covered over by the amyl acetate.

Amyl acetate has toxic properties, but they are slight. We ha no evidence of dangerous acute symptoms following the breathing c large quantities of vapors nor of organic diseases following long continued exposure. Koelsch [1] of the Bavarian Department of Labo (*Landesgewerbearzt*), made a special study of amyl acetate, which l published in 1912. As he was able to find very little written abou it, he made inquiries of the factory inspectors in Bavaria who cam in contact with workers in lacquers, metal varnishes, in bookbinc eries, leather works, varnishes for frames, pencils, and pen handle These inspectors told him that it was comparatively harmless, caus ing in rare instances drowsiness, dizziness, and headache, cough, fee ing of tightness in the chest, and nausea. All these symptoms wer worse in new men, as they quickly became accustomed to the vapor They knew of no chronic organic trouble resulting from the use o amyl acetate.

Koelsch interviewed five workmen himself, all dopers in an air plane factory, using amyl acetate-acetone dope. One of them com plained of weariness and occasional nausea and headache which h attributed to the odor of banana oil. The others had no complain to make. Then he experimented on himself, vaporizing amyl acetat and breathing the fumes. The result was an inclination to cough a feeling of heat in the head, and a slightly more rapid pulse. Late he grew dizzy, somewhat drowsy and confused and tired, with quick deep respirations. Going home at the end of the experiment, h found it difficult to mount the stairs.

To test it further, Koelsch made experiments on rabbits, exposing them to an atmosphere containing 0.5 to 1 per cent amyl acetate The acute symptoms of air hunger and nervous irritation passed away quickly when the animals were taken out into fresh air. Guinea pigs exposed day after day to such an atmosphere for 10 hours each day, developed marked nervous symptoms, ataxia, motor paralysis, but not persistent after removal to fresh air. After many days (237 and

[1] Koelsch, Concordia, 1912, vol. 19, p. 246.

340 days) they lost appetite and grew thin. Two that died had fatty liver and edema of the lungs with areas of pneumonic consolidation.[1]

Lehmann [2] finds the same comparative harmlessness of amyl acetate. He could not succeed in narcotizing rabbits completely with it, and death did not follow even so large a dose as 35 milligrams per liter of air. There was a good deal of irritation of the mucous membrane of nose, throat, eyelids and bronchial tubes, while larger doses produced alteration in gait, and partial narcosis.

His human experiments were slighter than Koelsch's. Two healthy young physicians breathed air with 5 milligrams of amyl acetate to the liter for half an hour. At first they felt an irritation of the throat, nose, and eyes, then dry burning in the throat, but no headache or nausea or change in pulse, and only a slight sense of weariness.

The smarting, burning, watery eyes complained of by men using nitrate dopes in airplane work are attributed by them to the fumes of amyl acetate, but it is evident from what has been said above that methyl alcohol may be the ingredient responsible. As for the general symptoms, it would be impossible to say which of the several volatile poisons, all of them with effects on the central nervous system, is the most active agent in any one case.

To sum up, workers in amyl acetate may be expected to complain of smarting eyes, running from the eyes, dryness of the throat, sense of tightness in the chest, and inclination to cough. More rarely they may feel drowsy and tired and vaguely nervous. Such symptoms as nausea, headache, vomiting, gastrointestinal distress, do not seem to be characteristic effects of amyl acetate. Nor have we so far any evidence of chronic organic disturbances in human beings as a result of long-continued exposure, though experiments on animals point to the possibility of such occurrences.

AMYL ALCOHOL OR FUSEL OIL ($C_5H_{11}OH$).

Marshall [3] gives the following list of alcohols with their fatal doses, calculated per kilogram of animal weight.

	Grams.
Methyl alcohol (CH_3OH)	6.00
Ethyl alcohol (C_2H_5OH)	7.75
Propyl alcohol (C_3H_7OH)	3.75
Butyl alcohol (C_4H_9OH)	1.85
Amyl alcohol ($C_5H_{11}OH$)	1.50

[1] Heffter and Joachimoglu in connection with their experiments on dopes tested also amyl acetate on two dogs. The animals showed irritation of the conjunctiva and at first they lost weight, but recovered. Killed on the ninth and eleventh days they showed no anatomical changes.

[2] Lehman, K. B., Archiv für Hygiene, 1913, vol. 78–79, p. 260.

[3] Marshall, quoted from Memoires des Poudres at Salpêtres, 1912, vol. 16, p. 128.

Fusel oil is therefore four times as toxic as wood alcohol and fi times as toxic as grain alcohol.

Salant,[1] who tested amyl alcohol and ethyl alcohol on animal found an even greater disparity between them. For frogs tl minimum fatal dose of amyl alcohol is only one-seventh to on eighth that of ethyl alcohol, and for rabbits one-fourth. It is poison to the central nervous system, causing symptoms like those ordinary alcohol, but it is more rapid in its effects, severer, and a companied by a more decided fall in blood pressure.

All the three varieties of dope are in use at present in the Unite States. The large numbers of airplanes for use in training aviato are covered with nitrate dope. The war planes which are just b ginning to be constructed will probably be covered with acetate dop free from tetrachlorethane. Cellulose acetate dope with tetr chlorethane as solvent is still used in a few American factories, b it is probable that if sufficient quantities of other solvents can co tinue to be produced the use of tetrachlorethane will be abandone in the near future. The United States Signal Corps gives the pre erence to the tetrachlorethane-free acetate dope for war planes. Th is, however, the situation at the present moment. When the inquir was made for the Bureau of Labor Statistics between April and Se tember, 1917, only two kinds of dope were in use to any great ex tent, namely, cellulose acetate tetrachlorethane dope and cellulos nitrate-amylacetate dope, for at that time the airplanes in cours of manufacture were either for training purposes or were purel experimental. The majority of factories used nitrate dope.

DOPE POISONING IN AMERICAN AIRPLANE WORKS.

Doping is simply painting fabric with liquid dope. Usually fiv or six coats are applied and there is an interval of an hour or s between coats to allow for drying. If only one part is to be dope the men go outside during this hour and do other kinds of work, bu if there are several they pass on to another part and work continu ously. Obviously the larger the number of parts drying the heavie the fumes in the doping room. The British regulations advise dry ing the doped parts in a room separate from the doping, but so fa this is not done in American plants.

In one large doping room the foreman had placed all the wing that were drying in a vertical position instead of horizontally, as i done in most places, because he said that in this way not only wa drying quicker, but the heavy fumes of the tetrachlorethane would sink to the floor and not poison the air.

[1] Salant, Proceedings Society Experimental Medicine & Med., New York, 1909–10, vol 7, p. 134.

"Taping" is applying narrow strips over the stitches in the linen, the dope being used to glue the strips fast to the fabric. Some men prefer this to "big work," doping wings, but others say that holding the head close to the fabric, as one must in taping, makes one breathe in more fumes. An experienced man can save himself a good deal from the fumes in doping by placing himself in such a way that they are drawn from him, not toward him. He begins work at the end nearest the exhaust, not the far end, so that as he works back the fumes are always between him and the outlet.

When the atmospheric humidity is high, drying of the dope is delayed. The best conditions for doping are a temperature between 75° and 85° F., with a fairly low humidity and no strong currents of air. Nevertheless it is evident that these conditions are not necessary, for much of the doping in this country is still done out of doors, or in open sheds, at the mercy of the weather. No scientific air conditioning is thus far provided in any plant.

The bureau of statistics and information of the New York State Industrial Commission, in their bulletin for June, 1917, publish a report of an inquiry "into the danger of the aeroplane industry from a hygienic standpoint." The investigators were Dr. Lester Roos and Dr. Rosalie Bell, of the medical inspector's staff. They visited eight factories in the State of New York, three of which were very small, the others employing, respectively, 5, 6, 7, 12, and 40 to 50 dopers. In two factories tetrachlorethane dopes were used, with six men engaged in doping. In two of the smallest factories the nature of the dope was not ascertained, and in the other four, employing some 65 dopers, nitrate dopes were used with acetone as solvent, or mixtures of acetone and such substances as benzol, amyl acetate, fusel oil and alcohol.

Examination was made of 52 of these dopers and it is noted that some disturbance of health was present in 35. In some it was very slight, no more than a dark colored urine, or slight anemia, or yellowing of the skin, or reddening of the eyelids. About nine of the 35 could be so classed. The remaining 26 gave histories of symptoms of ill health referable to the central nervous system or to the gastrointestinal or urinary system as follows:

Dizziness	14
Headache	6
Drowsiness	6
"Overcome by fumes"	4
Attacks of semiconsciousness	2
Attacks resembling alcoholic intoxication	2
Sense of weariness	1
Nausea	12
Vomiting	4

Loss of appetite	1
Burning in the stomach	1
Dark colored urine	1
Change in odor of urine	1
Burning micturition	1

Jaundice was observed in two and a third gave a history of former jaundice. One of the men with jaundice had dark urine. "Almost one month previously he was attacked with acute vertigo, syncope. He became nauseated and vomited. All the symptoms except the vertigo lasted for one day. One week ago he suffered a similar attack. On both these occasions he was compelled to remain at home. He complains at the present time of feeling weak, and having a highly colored urine. Physical examination shows a marked jaundice." This man was using cellulose nitrate dope free from tetrachlorethane.

The second case, less markedly jaundiced, had the following history: After one week's work with tetrachlorethane dope, he was attacked with dizziness and severe nausea. "Symptoms simulating alcoholic intoxication lasted twenty-four hours. Two weeks later while at work he was overcome for a period of two hours with an attack of vertigo and sleepiness. After three weeks more he had a similar attack and again showed symptoms resembling acute alcoholism for about three hours. He has highly colored urine at all times. Physical examination shows a slight jaundice." The dope in this instance contained tetrachlorethane.

In studying these cases, it is hard to determine which is the dope solvent responsible for the various symptoms. As we have seen, the characteristic effects of tetrachlorethane are gastrointestinal disturbances and jaundice. Nervous symptoms may also occur. The characteristic effects of solvents used with nitrate of cellulose are found chiefly in the nervous system. Benzol especially may cause a rapidly developing condition resembling alcoholic intoxication. The odor of amyl acetate is nauseating to some men, and both fusel oil and methyl alcohol fumes may cause vomiting, headache, dizziness.

No evidence of serious illness was discovered among these New York workmen, and no case of typical toxic jaundice, such as is described by British and German authors.

My own experience, covering three factories in which dopes with tetrachlorethane as the solvent were being used at the moment and in which about 15 dopers were employed, did not reveal any instance of toxic jaundice. The histories related to me did not even indicate an early stage of this disease; rather the symptoms were those of temporary intoxication and were referable to the central nervous system. I also interviewed men who had formerly used tetrachlorethane dope, though at the time they were working with the nitrate. They de-

scribed cases of poisoning in their own experience, or among fellow workmen, but these too were nervous in character, never jaundice with gastric trouble.

In view of the comparative newness of tetrachlorethane in industry it may be of value to describe the symptoms experienced by these dopers who had used it, even if the type of illness from which they suffered was light. Drowsiness, especially in hot weather, was more often mentioned than any other one symptom, and it was most troublesome in the early morning, passing away as the day went on. It was also worse after a holiday, the man having to go again through the process of accustoming himself to the fumes. One doper said that he was always drowsy for a while on starting work, then it passed away, but when he quit and went out into the open air the drowsiness would come over him again. Other men said they would fall asleep as soon as they reached home.

Several men told of having been made faint by the fumes so that they could work no longer that day, but always in these cases there had been some unusual circumstance that had encouraged absorption of the fumes. The room was closed and airless, or the weather very hot and humid. One man had lain down on the floor to paint the under surface of a wing, and thus breathed in the fumes which because of their heaviness always tend to fall to the floor. In another instance described doping was being done in a greenhouse and the men worked in a narrow aisle with wings stacked close on either side, drying or in course of doping, and the sun beat on the glass roof and walls.

The nervous symptoms were sometimes fairly severe, resulting in loss of consciousness, with temporary respiratory failure. Two men were doping wings in a room that had no artificial ventilation, and one of them was taken with dizziness and faintness and fell to the floor. The other, stooping to help him, upset the pail of dope, spilling some of it on the clothes of the prostrate man. Both had to be carried out into the open air, but the second man revived fairly quickly; the first was unconscious for a short time and had an alarming respiratory failure, so that artificial respiration had to be resorted to and his dope-soaked clothing removed before he revived. However, by the time the doctor arrived he was breathing again, and neither man experienced any lasting result from the accident, though both felt weak for several days.

Nausea and headache are likely to follow one of these attacks of dizziness and faintness, but symptoms of abdominal disturbance of any seriousness were apparently not present among the dopers I had an opportunity to interview.

Constipation was complained of only occasionally. Two men spoke of an increased craving for food at the same time that they were losing weight. Men who use tetrachlorethane dope for many weeks or months are said by fellow workmen to have a dull, "dopey" look in the eyes, which makes them recognizable at once.

The men using acetone-amylacetate-benzol-methylalcohol dopes did not complain nearly so often of dizziness, drowsiness, or attacks of faintness as did the tetrachlorethane men. For instance, there were nine men among the latter who gave a history of having been overcome by fumes once or oftener, while only three of the former gave such a history, yet there were more than four times as many men employed using these dopes as there were using tetrachlorethane dopes.

Some of the men using amyl acetate dopes complained of headache during the first hours of work, of cold hands and feet, of itching eyelids, watery eyes, feeling of dryness in the throat, and that vague sensation of drowsiness, slight nausea, and weariness, which they describe under the term "dopey."

There seems to be a general impression among the men who use tetrachlorethane dopes that they are less harmful than the dopes containing amyl acetate. The disagreeable odor of the latter and its irritating effect on the eyelids and on the throat are experienced at once, while tetrachlorethane, with its less overpowering odor, has no immediate effect, and seems to the workmen comparatively harmless. This opinion is shared by some physicians also, but it is quite wrong. Amyl acetate, though disagreeable, is not at all a dangerous poison, while tetrachlorethane is a slow, insidious poison to the cells of the liver and kidneys. Nevertheless, it is not at all unusual to hear a foreman say that he tried at first to use an amyl acetate dope, but had to give it up and take one with tetrachlorethane as a solvent, because his men could not stand the banana oil.

It must be remembered that the effect of these volatile solvents on workers in American airplane factories has not really been tried out. They have been exposed to fumes only at intervals and for short periods. Fifty-three dopers were asked as to the number of weeks or months they had been employed and all but five had worked less than a year. Seventeen had been doping for less than one month, 12 from one to three months, and 11 from three to six months, leaving only 13 who had worked over six months.

This is one reason why there has been no serious poisoning from volatile dope solvents in this country up to the present time. Another reason is found in the fact that much of the doping has been done in the open air, or under a shed with open sides, and so the fumes from the solvents were rarely heavy. Naturally since our entrance into

the war these conditions have changed, and we have no reason to think that we shall escape the experience of the British and the Germans with toxic jaundice if we continue to use tetrachlorethane dopes and do not adopt vigorous measures for the protection of dopers from fumes, for from now on there will be many men at work doping throughout their full shift, and they will be in rooms filled with dope-covered fabric. Nor are the other solvents free from danger. Indeed their poisonousness may prove to be greater than we now think.

The following is a brief description of conditions in the airplane industry in the United States as they were found in the spring and summer of 1917.

Of the 18 factories visited, 2 were not yet completed and it was not possible to find out anything about their plans of work, not even the variety of dope they intended to use. Five of the remaining 16 were using acetate dope with tetrachlorethane as solvent, the other 11 were using dopes with acetone, amyl acetate, benzol, and various alcohols—ethyl, methyl, or amyl.

About 75 men were employed as dopers, but the number in some factories was to be increased very soon and probably 90 is more nearly correct at this time of writing. However, even now not all of them are employed all their time in doping. The five factories using tetrachlorethane dopes are not the largest, and employ all told only about 16 men in these departments. Dopers are always men, and it is very rare to see a woman in the doping room, though occasionally she may work there at an emergency job of covering or repairing. No lads were seen in this employment, and no man under 21 years. Though we have no reason to believe that women are more susceptible to dope poisoning than men, the British experience proves that immature workers, those under 20 years of age, are decidedly more susceptible than adult men and women, so it is a matter for congratulation that thus far we have not employed boys and girls in our doping rooms.

In describing the ventilation systems now in use in doping departments it is necessary to bear in mind the temporary character of many of the present plants. Naturally, it is hardly worth while to install expensive artificial ventilation when the intention is to move soon into larger quarters. Six factories were in this condition; they were soon to be abandoned, while four more had just moved into new quarters and were not yet fully established. Five that were in permanent quarters had installed various forms of artificial ventilation, which it may be well to describe in full.

No. 1 and No. 2 have slotted floors with down suction. In No. 1 the doping room is large, about 160 by 30 feet, and the ceiling at the

peak is 18 feet high. There is a row of windows on one side, almost touching each other, and the panes in the middle were open at the time the visit was made, a cool day in early June, yet the air was oppressively heavy with banana oil. The floor, which was decidedly dusty, is built with three-quarter-inch cracks between each seven boards, the boards being 4 inches wide. These cracks are everywhere partly filled with dust and threads of fabric. There is a solid floor about 2 inches below the slotted floor, and the shallow space between has dirt and threads partly filling it. An elaborate double system of pipes is installed to supply and remove air. The intake system runs along the middle of the ceiling, sending in air heated to about 90° F. in a horizontal stream, while the pipes for removal of the air are placed along the floor. There are nine oblong pipes, about 18 inches by 8 inches, which run from the floor level to a larger pipe placed along the ceiling at the side, which meets in the center of this side wall a main pipe connecting also with a similar branch from the other side of the room. Here there is supposed to be a motor fan to produce suction, but at the time the visit was made no draft was perceptible at any point in the floor and the fumes were certainly not being carried off.

No. 2 has the same system, but in much more satisfactory form. Here the doping room is only partly separated from the main room by walls that stop short about five feet from the ceiling, which at this point, is about 20 feet high, while at the sides it is 11 feet. Four windows are on one side, two at one end. The floor has one and a half inch cracks every four feet and three inches below is the solid floor. In the outer wall of the room is a very powerful fan which exerts suction on the interfloor space, and this suction is so efficient that a small piece of paper poked through a crack is caught at once and appears in a few moments flying from the fan. The air is said to be changed every minute and certainly no fumes were perceptible at that time.

A simpler form of this kind of ventilation, which seems to work admirably, was found in a factory using tetrachlorethane dope—the two described above use amyl-acetate-acetone dopes. This doping room is separated from the rest of the factory but has a wide doorway into the main room closed only by a heavy canvas curtain. There are six windows on one side, and the room is 22 by 50 feet, the ceiling about 12 feet high. The air intake is from the upper sashes of the windows. The air is removed by down suction in the following way: Along the whole length of the floor in the middle of the room runs a wooden flue, about a foot high and 3 feet across, with cracks about three-fourths of an inch wide and 4 feet long at intervals. The suction is provided by a motor fan placed outside the

room at one end, and as soon as it is started the rush of air through the cracks in the flue is strong enough to make the heavy canvas curtain closing the door belly inward. Wings for doping are placed diagonally across the flue, which is not wide enough to impede the doper as he works. There are also two electric fans on the inner wall for use in very hot weather.

Three factories now building are to have some form of down suction through a slotted floor. Only one of these will be using tetrachlorethane dope.

In two plants there is a simple but effective system of ventilation by means of a fan so placed as to draw the air from near the floor level. One of these plants is situated on the sea coast and the doping shed has an unobstructed supply of air off the water. Doping is done in the second story of a building at the water's edge. This room is about 150 feet by 45 feet and the ceiling is 20 feet high. There is a wide double door at each end, one of them opening out toward the sea. Just in front of the door space, which is 8 feet high and 6 feet wide, is an old airplane propeller. The fan is set low, about 2 feet from the floor. Doping is done at the end of the room near the fan and then the wings are moved back to dry. The fan was running at the time, and the air was very fresh. The only spot where tetrachlorethane could be smelled was close to the doper.

In another factory no doping was being done at the moment, so that it was not possible to be sure how efficient the system actually was. The air intake here is from windows in the saw-toothed roof, and the suction fan, about 3 feet in diameter, is placed at the floor level opposite these windows. Seven wings were drying there and the odor of amyl acetate was not at all disagreeable.

Three fairly large plants depend entirely on window ventilation, though one of them uses the dangerous tetrachlorethane dope. In all three places the management is well aware of the risks involved in doping and expects to install an artificial system of air removal after the output has increased to the point where constant employment in the doping room will be required. At present dopers work for only a few hours a day.

As a rule, doping is carried on in a room or a building quite separate from the other workrooms, but in three plants it is done in the same rooms with the construction or sewing and covering. However, two of these factories were at the time they were visited still in temporary quarters. It does happen sometimes that simply as a matter of convenience a large wing may be doped in the assembling room, because it is difficult to get it into the doping room. In this case, of course, a good many workers who are not doping are obliged to breathe dope fumes. Last summer on a very hot day a woman work-

ing about 30 feet from a large wing that was being covered with amyl acetate dope fainted and was unconscious for about 20 minutes, although the assembling room is fully three stories high, and the manager thought the ventilation was abundant. Such an accident is quite unnecessary and should not be permitted. Doping should be confined to one room.

As long as a factory is in the experimental state, doping is often done out of doors, or in an open shed, very satisfactorily as far as the air supply for the workers is concerned. Sometimes these makeshift arrangements are not so good. One company used tetrachlorethane dope in a shed huddled down beneath a hill which cut off the air on one side and there were buildings close enough on two other sides to shut off the air on those sides. Another company was using an old paint shop on a crowded city street, and another an abandoned garage, surrounded by city buildings. But all these will either close down or secure better quarters, and in the meantime the exposure to dope fumes is so intermittent and short that it is doubtful if any real risk is incurred. If such conditions were to persist after construction had reached the degree it is expected to, then there would be a serious menace to the health of the dopers, especially where tetrachlorethane dopes are used.

Fumes are the dangerous feature in doping, but personal cleanliness should not be entirely neglected, and it is to be hoped that it will receive more attention in the future than it has up to the present. Only one plant visited had really adequate washing facilities for dopers—that is, hot water, soap, and towels. Eating in doping rooms is not usual, but sometimes men do take their lunch there, and this should, of course, always be forbidden.

The working day is usually nine hours. One plant was employing a night shift for 5 nights in the week, 12 hours a night. Since acetone-amyl-acetate dope is used here, the risk involved in such long hours is not so great as it would be if tetrachlorethane dope were used.

RULES FOR PREVENTION OF DOPE POISONING.

British experience is embodied in a series of recommendations for the control of doping in airplane factories, and it must be remembered that though these recommendations were framed to protect users of tetrachlorethane dopes, they have continued to be applied in airplane works even since the use of these dopes was abandoned and safer dopes substituted.

The following is an extract from Form 356, issued by the factory inspection department of the British Home Office in February, 1916:

Dope Poisoning.

Continued incidence of poisoning in aeroplane factories has led to the addition of the main symptom caused by tetrachlorethane—toxic jaundice—to the diseases which, if contracted in a factory, must be notified to the factory department. The occupier is required to report every such case to the district inspector and to the certifying surgeon, and the medical practitioner in attendance has also to report it to the chief inspector. (S. 73, Factory Act, 1901, and Order of Nov. 27, 1915.)

Not every symptom set up by tetrachlorethane, it should be observed, is reportable. The requirement is limited to the serious sign of jaundice, and in view of its unmistakable character the difficulty of compliance should be small.[1]

The size of the aeroplane wings unfortunately makes it impracticable to remove the vapor completely, at the point of origin, by local exhaust which would carry it off without allowing any to pass into the air of the room. Reliance, therefore, in minimizing the noxious effect has to be placed on dilution of the air so as to keep down the tetrachlorethane and other vapors to a nontoxic proportion. The standard needed for securing this is 30 changes of the air of the doping room per hour. Where this standard has been secured and maintained for all processes in which tetrachlorethane in dope may be used, illness, if not altogether prevented, has ceased to cause serious anxiety. On the other hand, where it has fallen short of 20 changes, toxic jaundice has not failed eventually to show itself, except in the few factories where use of dope has been so intermittent as never to have exposed the workers to a toxic dose.

The means of ventilation must be mechanical, preferably by volume or propeller fans with free discharge to the open air. Owing to the high specific gravity of the vapor, the fans should be fixed at the floor level, or below this level where space allows the construction of large ducts under the floor. Air inlets, of the hopper type, the total area of which should be not less than three times the discharge area of the fans, should be provided at the side of the room opposite the fans at a height of about 10 feet above the floor level. Exceptionally, however, where the fresh air is supplied by a satisfactory plenum system, or direct from the erecting shop over a partition of sufficient height, screening the doping room from the rest of the shop, such air inlets may be unnecessary.

Owing to varying conditions of construction in different factories, it is impossible to standardize methods of ventilation for doping rooms, but in new works, or extension of existing plants, plans of proposed ventilating arrangements should be submitted to the inspector for dangerous trades, Home Office, before the work is put in hand.

At the commencement of the war, several cases occurred among persons employed in fabric making, erecting fittings, etc., before exhaust ventilation and separation of the process of doping from others was recognized as indispensable. These two conditions have now been secured for doping the wings, but recent experience has shown that insufficient attention has been paid in some factories to the necessity of exhaust ventilation in all processes in which tetrachlorethane dope is constantly used. This applies especially to taping—now sometimes found carried on in the general erecting shop without

[1] On the other hand, "dope poisoning," i. e., any illness attributable to the ingredients of the dope, has been added to the schedule of diseases to which section 8 of the Workmen's Compensation Act, 1906, applies.

any precautions—to which operation the three last fatal cases have been mainly due. Notwithstanding the comparatively small amount of dope used the close application required brings the face right into the fumes. And it is the same with the fuselage and other components—struts and landing gear. One attack was traced to the doping on one occasion of especially large wings in the general erecting shop because (it was alleged) the doping room proper could not accommodate them. There was a tendency in some premises before the great development of the industry was fully realized, to make the doping room too small. This should be avoided in future construction, but the risk involved by such a procedure as that described makes it incumbent on the occupier to improvise for any exceptional occasion a special exhaust system.

Pending the introduction of an efficient substitute for tetrachlorethane, it is most important that occupiers should (in addition to provision and maintenance of a high standard of exhaust ventilation) consider and apply as far as they can the following further suggestions for safeguarding the health of the workers, which are the outcome of experience gained in various works:

(1) *Exclusion of other work from the doping room.*—The need for this has already been pointed out on page 2.

(2) *Alternation of employment.*—Considerable periods of overtime or long spells in doping or taping have been noted as having preceded some of the fatal attacks. Obviously, as poisoning is a matter of dosage, and the effect of tetrachlorethane is cumulative, the object aimed at by ventilation is defeated if hours of workers are prolonged beyond that for which the ventilation has been designed. In factories where alternation of employment has been arranged, e. g., two days doping and two in other work, or one week in and one week out, improvement in health has resulted. And when such an arrangement is adopted occasional necessary overtime might, it is suggested, be undertaken by those on the out turn rather than by those who have already worked a full day in doping.

In addition to the alternation referred to, in one factory the women engaged in doping are made to spend half an hour morning and afternoon in the open air, so that no spell of work in contact with the fumes lasts longer than two hours.

(3) *Periodic medical examination.*—A fortnightly medical examination has served useful purpose, both in reassuring the workers and also in enabling those showing premonitory symptoms to be suspended or transferred to other work. The objective signs, however, which the surgeon has to guide him are few, and he can be materially assisted by information from the foreman or matron as to the state of health of the workers in the intervals between his examinations. After each visit the surgeon should state in writing the names of those (if any) whom he considers should be—

(*a*) Suspended as definitely suffering from dope poisoning necessitating absence from work until they are quite well, or

(*b*) Transferred temporarily to other work as a precautionary measure on account of equivocal signs.

Medical supervision on these lines has been adopted on their own initiative or on suggestion from the factory department in several aeroplane works, and the same course should be pressed in all where doping is continuous. It is important that it should be carried out by a medical practitioner who is familiar with the nature of the work and the symptoms to which it may give rise, preferably by the certifying surgeon, as he is in touch with the department and is thus kept informed of the latest observations on the subject. A health

register and instructions as to the conduct of the examination will be sent by the medical inspector to the medical man whom you appoint for the purpose as soon as notice of his name is received here.

A worker suffering from effects of dope should be excluded from all contact with it until he is quite well, a medical certificate to that effect being obtained. Instances are known in which premature resumption led to recurrence of symptoms in an aggravated form.

Instruction to workers.—Certain apparently small points have been noticed which have a bearing on liability to attack. Some instruction to new workers as to how they can best avoid inhalation of fumes without interfering with work is called for, especially bearing in mind the youthfulness of some of them.

(1) Doping should be commenced at the end of the wing nearest to the exhaust fans, and should proceed backwards from that point.

(2) In some factories the wings, as soon as the doped surface is "tacky," are carried to a drying room or closed chamber (separately ventilated) thus diminishing largely risk from inhalation of fumes. Where no such arrangement exists, the wings should be placed to dry in a position between the workers and the exhaust draft, but not so as to obstruct the fans.

(3) After doping, the safest position for the worker is that nearest to the fresh air inlets, but frequently men and women are seen standing close to the exhaust, and therefore breathing the air which is most highly charged with the noxious vapor; the reason being that either the flat top of the outlet duct has been found a convenient place to keep dope pots, brushes, etc., or the light is better there than at the far side. Short sightedness, unless corrected by glasses, should debar from taping if not from doping.

(4) Work should not be commenced on an empty stomach, and where tetrachlorethane is an ingredient of the dope a worker "must not be allowed to take a meal or to remain during the times allowed to him for meals in any room in which such substance is used." (Factory Act, 1901, S. 75.) Hence the need for provision of a properly equipped meal room on lines suggested by the health of munition workers' committee.[1]

Even if, as is hoped, discovery of an efficient substitute enables use of tetrachlorethane to be eliminated from the dope, exhaust ventilation will still be necessary to prevent the effects (fortunately much less noxious) from such solvents and diluents as benzene, acetone, and methylated spirit, which must necessarily continue to be used.

SUMMARY.

In the manufacture of airplanes there is one process which may involve danger of occupational poisoning, the application to the fabric of a water-proofing, tightening mixture, known as dope. This is usually a cellulose compound, the nitrate or the acetate, dissolved in various volatile substances, which are more or less poisonous to human beings.

Cellulose acetate dope was formerly made with tetrachlorethane as the principal solvent. It is now made also without tetrachlorethane, dissolved in a mixture of acetone, alcohol, and benzol. Cellu-

[1] Memorandum on Industrial Canteens, Cd. 8133, 1915, price 1d. See Bulletin of the U. S. Bureau of Labor Statistics No. 222, pp. 29–36.

lose nitrate dope is made with amyl acetate and acetone and usually various alcohols and benzol.

Dope poisoning which appeared in airplane factories in 1913 in Germany and England was caused by the presence of tetrachlorethane in the solvent. This poison is very like chloroform but four times as powerful. Acute poisoning causes drowsiness, confusion, dizziness, sometimes loss of consciousness, or nausea and vomiting and gastric pains. Repeated exposure to the fume causes more pronounced gastrointestinal symptoms and may set up an acute degeneration of the liver with jaundice. This condition, known as toxic jaundice, was the form of dope poisoning which occurred in airplane factories in Germany and Great Britain, and in several instances proved fatal. The British have in consequence recognized such dope poisoning as an occupational disease and have substituted for military and naval airplanes a dope free from tetrachlorethane.

The other solvents for cellulose acetate are acetone, alcohols (wood alcohol and grain alcohol), and benzol. These are all volatile and produce, when inhaled or when spilled on the skin, some disturbance of the central nervous system, but none has the effect on the liver and other organs which is exerted by tetrachlorethane. Benzol is the most poisonous and when inhaled in large quantities it may cause death, but in the proportion used in dope solvents such severe poisoning would not be looked for. The milder forms of acute poisoning would be more probable—dizziness, headache, slight symptoms of drunkenness, with excitement or depression, and, if exposure is long continued, symptoms of slow chronic poisoning with anemia, tendency to hemorrhages, and nervous and nutritional disturbances.

Acetone is the least dangerous of these solvents; indeed, there is no proof that acetone as used in industry is at all harmful. Methyl alcohol (or wood alcohol) may cause serious symptoms, even when present in small amount, for some people are very susceptible to it. The symptoms of chronic poisoning are much more serious than in chronic poisoning from grain alcohol, and may involve the eyes, causing permanent impairment or even loss of sight.

Cellulose nitrate dopes contain as solvents amyl acetate, acetone, or other ketones, various alcohols (ethyl, methyl, and amyl), and benzol. Amyl acetate has a disagreeable odor and an irritating action on eyes and throat, but so far as is known at present, it is not a dangerous poison. Amyl alcohol is said to be more rapid in its effects than grain alcohol and from four to seven times as poisonous.

In American airplane works the dopes used until very recently have been chiefly cellulose acetate dissolved in tetrachlorethane, or cellulose nitrate dissolved in amyl acetate and acetone. As cellulose

nitrate dope is inflammable and can not be used on war planes, and as tetrachlorethane is a dangerous poison, a third variety of dope has now come into use, which is made with cellulose acetate dissolved in a mixture of acetone, alcohol, and benzol. In the future it is probable that this dope will be used for war planes, while cellulose nitrate dope will continue to be used on airplanes being manufactured for training purposes.

There has been no serious dope poisoning in American airplane works as yet, and no authenticated case of tetrachlorethane poisoning resulting in toxic jaundice has ever been reported in this country. This is probably to be explained by the fact that though tetrachlorethane was used in our factories, the amount of dope used was usually small, doping was not continuous, and much of it was done in the open air. Moreover, dopers were continually shifting; not many remained more than a few months in the work.

The enormous increase in airplane manufacture in the United States is coincident with a gradual abandonment of tetrachlorethane as a dope solvent, so that we have no reason to expect that toxic jaundice will appear among the dopers in our factories. It is quite possible, however, that there may be more or less serious poisoning from benzol and from methyl alcohol, and it may prove that the other solvents used in nitrate and acetate dopes are not as harmless as we now think them. It is only prudent to assume that such danger is present and to provide carefully for the removal of fumes from doping rooms. The British requirements for artificial ventilation and for the medical supervision of dopers—requirements framed when tetrachlorethane was the solvent used—have remained in force now that the safer dopes have been substituted.

American airplane works are at present in process of building or remodeling. In many instances artificial ventilation is being installed; in others only natural ventilation is provided. There is little reason to expect serious poisoning among the users of dopes in these factories, but there will be opportunity for the slow, chronic effects of long-continued exposure to large quantities of amyl acetate and smaller quantities of benzol, wood alcohol, amyl alcohol, etc., among dopers, and this should be prevented by good exhaust ventilation. Doping should be strictly confined to one building. No other work should be carried on in the room. Dopers should be taught to avoid fumes by starting their work at the end nearest the exhaust vent and working back from there, for in this way the fumes will be continually drawn away from the air they breathe. Medical supervision, with periodic examination of the dopers, is

very desirable, since these poisons are comparatively unfamiliar and much valuable information as to their effects on industrial workers could be gained in this way.

In any factory where tetrachlorethane dopes are used the dopers should be protected not only by a good system of down-draft exhaust ventilation, but by shortening the hours of work, by alternanation of doping with outdoor work, and by providing periodic medical examination, with authorization to the physician to suspend from work those who show premonitory symptoms of poisoning.

TRADE AGREEMENTS IN THE WOMEN'S CLOTHING INDUSTRIES OF CHICAGO.[1]

BY BORIS EMMET, PH. D.

By reason of their geographical location, the Chicago women's garment industries never experienced the great superabundance of immigrant labor so characteristic of the New York garment trades in the days of unrestricted foreign immigration. This does not mean that Chicago garment manufacturers have ever felt any real shortage of workers. On the contrary, in spite of their great distance from the principal point of immigration, Chicago employers have always been able easily to secure workers, a fact evidenced by high peaks of seasonal employment[2] which are made possible only by the presence of a liberal supply of labor.

The cessation of immigration affected the Chicago garment industries less radically than it did similar industries in New York City. As yet no shortage of labor has been experienced. In connection with this latter statement, however, attention must be called to another difference in conditions between New York and Chicago, namely, the presence of a considerable amount of war work in New York City. To date relatively little of this war work requiring the services of needle-trade hands has found its way to Chicago.

The women's garment industries of Chicago, however, are gradually beginning to draw Government contracts. This fact tends to reveal to all concerned the effects of an almost total interruption of immigration. Those of the employers who, in addition to enjoying a normally busy season, have received or are about to receive Government contracts are beginning to wonder where the labor supply will come from when the busy spring season arrives. A similar state of mind exists among the officials of the women's garment workers' unions. Although many of their members are working only part

[1] This article is a preliminary summary of one of the phases of a study of trade agreements to be published by the bureau. Similar articles dealing with trade agreements in the women's clothing industries of New York and Philadelphia appeared in the issues of the MONTHLY REVIEW of December, 1917, and January, 1918, respectively.

[2] Cf. Bul. No. 183, U. S. Bureau of Labor Statistics, pp. 45–49.

time at present, the union offices receive daily inquiries regarding wages and hours from employers about to embark on Government work which will require the services of garment workers. There is no doubt that with the appearance of the busy spring season in these trades, and with increased numbers of orders for Government work which are bound to come, a real shortage of skilled labor will be experienced in the women's clothing industries of Chicago.

CLOAK AND SUIT INDUSTRY.

Sporadic attempts were made by the International Ladies' Garment Workers' Union to introduce collective bargaining into the cloak and suit industry in Chicago, but down to September, 1915, none of these attempts met with success. As a matter of fact, no really effective organization of the workers in the trade existed prior to the summer of 1915.

Early in the fall of 1915, after a threatened general strike, conferences were held between representatives of the union and representatives of the two cloak and suit manufacturers' associations. These conferences resulted in an agreement to submit all the differences to a board of arbitration, consisting of one representative of the union, one of the manufacturers' associations, and a third member agreeable to both sides. Such a board of arbitration was immediately organized, and as a result of hearings, at which both sides were represented by counsel, an award was made on September 24, 1915. This award became the trade agreement of the industry, to be in force from September 24, 1915, to July 1, 1917.

The basis of the 1915 award was stated by the board to be "the conditions prevailing at that time in the New York cloak and suit industry under the so-called protocol agreement." The board felt the necessity of creating "an approximate uniformity to conditions prevailing in other communities, and particularly in the city of New York." Certain differences between the Chicago and New York markets, however, had to be recognized. These were: (1) The difference in the nature of the business, the New York market being the predominating one—a market which more than any other was responsible in determining the conditions of manufacture and sale; (2) differences in the relations among the employers themselves, attributable to the fact that the New York manufacturers were better organized and more able to cope with questions arising out of the introduction of uniform labor conditions.

As finally formulated the agreement is between the joint board of Locals 18, 44, and 81 of the International Ladies' Garment Workers'

Union and two manufacturers' associations—the Chicago Cloak and Suit Manufacturers' Association and the Northwest Cloak and Suit Manufacturers' Association. The first-named association has a membership of 25 and employs from 1,500 to 1,800 workers; the second has a membership of 33 and employs between 800 and 900 people. The agreement provides for a 50-hour week, restricts overtime greatly, prohibits employers from operating their shops more than six days in any one week, and grants to the week workers seven legal holidays annually with pay. It specifies minimum weekly rates of wages for the week workers and minimum hourly rates for the pieceworkers. It obligates the employers to maintain safe and sanitary shops and prohibits home work and "team work" or inside contracting. Outside contracting is declared to be permissible, provided the standards of labor maintained by the contractors are equivalent to those specified in the agreement. Each employer is to maintain a preferential union shop—that is, a shop "in which the standards of the agreement are maintained and wherein preference in employment and lay-offs is given to members of the union." Employers retain the right of absolute discharge during the first two weeks of employment, but discharges occurring after the trial or two-week period are made subject to review by the duly constituted authorities for the adjustment of grievances.

The methods for the adjustment of grievances are as follows: Any complaint of either employer or employee is to be adjusted, in the first instance, by the union representative on the premises, called the shop chairman, and the employer. If these two can not agree, the controversy is submitted to an adjustment committee, consisting of a representative of the employers' association to which the employer concerned belongs and a representative of the union. Cases upon which the latter two can not agree are submitted for adjustment to a committee of three, one of which represents the employers, one the union, and the third member or umpire is chosen by mutual consent. In cases of inability to agree upon a third person, the latter is appointed by the board of arbitration created by the agreement. This board, consisting of three members, one representing the employers, one the union, and a third an impartial person, is given jurisdiction in all controversies arising under the agreement. It is also the court of final appeals. Decisions of the adjustment committee referred to above, if not satisfactory to either of the parties, may be appealed to it. All decisions of the board of arbitration are to be final.

The agreement prohibits the occurrence of strikes and lockouts and expressly states that all differences of opinion arising between

employer and employee are to be adjusted peaceably in the manner above indicated.

On July 1, 1917, th agreement was renewed by mutual consent for a period of one year. At the same time, certain demands of the workers upon which the parties themselves could reach no satisfactory settlement, were submitted to arbitration. The findings of the board of arbitration in this connection were announced on August 21, 1917, and were as follows:

FINDINGS OF THE BOARD OF ARBITRATION, AUGUST 21, 1917.

1. Hours and Regulation of Work.

The regular working week shall consist of 49 hours; 9 hours on each of four week days, 8 hours on one week day, preferably Friday, and 5 hours on either Saturday or Sunday, dependent upon which of those days the employee observes.

Overtime shall be allowed only during the periods of from February 15 to May 15 and August 15 to November 15. It shall not exceed 12½ hours per week, to be distributed at not to exceed 2½ hours per day on week days and 4 hours on Saturday or Sunday, except that from August 15 to September 15 there shall be no overtime on Saturday or Sunday.

Overtime on sample work may be required during all the months of the year, instead of during the limited period above provided.

Whenever the Jewish New Year or Day of Atonement falls on a week day and a holiday is granted, then the preceding or following Saturday or Sunday, as may be determined by the employer, shall be considered as a full working-day and not as a half day.

Whenever overtime is allowed under the foregoing provision it shall be the duty of the employee to work such overtime, provided notice thereof be given on the preceding day.

Overtime for week workers shall be paid at the rate of one and one-half times the regular weekly wage.

If pieceworkers are required on any day to work more than one hour overtime, they shall be allowed 30 cents for supper money, whether they actually expend the same or not.

2. Wages.

[The changes in wage rates are shown in footnote on p. 70.]

3. Sanitary Conditions.

The matter of enforcing the use of air irons is reserved for further consideration.

4. Relations Between Employers and Employees.

The following additional provisions are made:

Each employer shall promptly notify the business agent of the union of the names and addresses of all contractors, subcontractors, and subsidiary shops with whom he is in any manner dealing, and of persons to whom raw material is given or sold, or who are purchasing such material wholly or partly upon

the credit or responsibility of such employer, for the purpose of manufacturing or of selling the finished product to the employer. The board of arbitration, however, reserves the right to amend or change this requirement, and further or otherwise to regulate the relations between, and the obligations of, the employer, for the contractor, subcontractor, subsidiary shop, and also persons from whom the employer purchases made-up garments.

If after notice from the union that the subcontractor fails to observe the standards, the employer fails at once to withdraw the work then in the hands of the subcontractor, and on complaint the charge of failure to observe the standards is upheld, the employer shall pay to the union for all work done in such shop after such notice on the scale fixed by this agreement.

A reorganization in good faith shall be taken to mean a bona fide reorganization of the employer's business, necessitated by the permanent curtailment of his business, or a fundamental change in the character of the business.

A reorganization shall not be effected, however, unless 30 days' notice of the intention to reorganize shall be given to the business agent of the union.

5. Penalties.

The board of arbitration reserves the right to make award as to penalties to be enforced against either side, or the member thereof, for violation of the agreement.

6. Except as to Wages, the Foregoing Modifications Shall Be Effective as of August 19, 1917.

As to Wages of Week Workers.

Any week worker who from and after July 1, 1917, shall have received less than the minimum fixed by this modification, shall receive the difference between the amount received and such minimum for such back period.

As to Pieceworkers.

It is the intention that the increases hereby granted shall be retroactive as of July 1, 1917. It has been represented, however, that through error or agreement in some instances, the garment price has been calculated on a basis in excess of that fixed by the original award, and that perhaps in some instances it has been calculated on a lower basis. The price adjuster shall, in the first instance, determine whether any such miscalculations have been made, and if on such determination it is found that the workers have been paid less than they would have been entitled to under the new basis, they shall be paid an additional sum, based on the difference between the old and the new scale. If, however, it is found that they have already received pay based on the new basis, or in excess thereof, then no back pay shall be paid in such instance. The determination shall be made as to each garment on which complaint of underpayment on the new basis is made.

An examination of the findings shows that the principal changes introduced by the decision of the board of arbitration of August 21, 1917, were a reduction in the hours of labor; increases in the weekly

and hourly rates of wages[1]; registration of contractors with the union in order to enable union officials to determine if agreement standards are maintained in the contractors' shops.

Collective bargaining in the Chicago cloak and suit industry is not confined to establishments of the members of the two manufacturers' associations mentioned. In addition to the trade agreement with the latter, the union has at the present time, about 50 oral agreements with as many individual establishments. These employ about 1,000 workers. The terms of these agreements are practically the same as those of the agreement with the two employers' associations.

The representatives of the employees concerned are unanimous in their approval of the existing methods of collective bargaining. With a few exceptions, the members of both the employers' associations are heartily in favor of the existing trade agreement "as the best possible method for dealing with the employees" and as "the only method to standardize labor costs in the industry." When discussing the value of the agreement employers generally refer to the highly unsatisfactory conditions which existed in the industry prior to the introduction of collective bargaining. They emphasize the fact that the industry is highly seasonal and extremely competitive. A stoppage of work during the busy season may, they say, easily

[1] The following table shows the weekly and hourly rates of wages prior to and after the decision of August 21, 1917:

Weekly and hourly rates of wages prior to, and after, the decision of Aug. 21, 4917.

Occupation.		Rates of wages.	
		Prior to Aug. 21, 1917.	After Aug. 21, 1917.
WEEK WORKERS.			
Cutters:			
Full fledged, and grading patterns	per week	$27.50	$30.00
Full fledged, but not grading patterns	do	25.00	27.50
Class A, in trade not less than 3 years	do	22.50	25.00
Class B, in trade not less than 2 years	do	18.00	20.00
Class C, in trade not less than 1 year	do	15.00	17.00
Trimmers:			
Class A, in trade not less than 3 years	do	20.00	22.50
Class B, in trade not less than 2 years	do	18.00	20.00
Class C, in trade not less than 1 year	do	15.00	16.50
Canvas cutters	do	12.00	13.00
Sample makers	do	23.00	25.00
Button, hook and eye sewers, skirt-bottom basters	do	8.00	9.50
PIECEWORKERS.			
Operators and pressers:			
Operators	per hour	.70	.75
Jacket upper pressers	do	.60	.65
Skirt upper pressers	do	.55	.60
Jacket under pressers	do	.50	.55
Skirt under pressers	do	.45	.50
Finishers:			
Class A basting, felling, and supervising	do	.50	.55
Class B basting and felling	do	.40	.45
Class C felling	do	.22½	.25

result "in ruining the business of the entire season," because a failure to deliver the goods on time means "a customer lost forever." The present system protects the employer from disastrous stoppages during busy seasons, not only because such stoppages are prohibited by the agreement, but because definite channels are provided through which the employees are certain to secure an impartial adjudication of their grievances.

In discussing the present workings of the trade agreements in the Chicago cloak and suit industry mention should be made of the methods used for the adjustment of piece-rate controversies which occur almost daily in every shop, and which in the past have been the most fruitful source of strained relations between employee and employer, having resulted frequently in lockouts and strikes.

The agreement specifies that all rates to be paid to pieceworkers shall be agreed upon in advance by individual employers in consultation with, and with the approval of, a committee of their employees, and shall be adjusted as nearly as possible on the minimum basis specified by the agreement for "each hour of continuous work by a worker of average skill." It is the duty of the employer and the price committee of his employees to endeavor to agree upon the piece rates to be paid. In case of disagreement the matter is referred to two officials, one representing the manufacturers' associations and the other the unions. If neither the employer and his employees nor the officials last mentioned are able to reach an agreement, the dispute is then referred to an impartial price adjuster, who is selected and paid jointly by the two employers' associations and the unions. In his work of adjustment he is assisted by officials representing the two parties, but is not obliged to be guided by their opinion. He is expected to render an independent judgment which is final and obligatory on both parties. The agreement provides that disputes regarding piece rates are not to result in a cessation of work on the garment in question. If the service of the impartial adjuster can not be obtained immediately it is the custom for the employer and the price committee representing his employees to agree upon a low flat rate per garment, subject to back pay on the basis of the final rate determined by the adjuster.

The decisions of the impartial adjuster are made informally, on the premises of the establishment in which the controvery occurs, and in the presence of the officials of both parties, the last named acting, as already stated, in an advisory capacity only. A record of each adjustment is made, showing the number of style and the piece rate arrived at by the adjuster.

It is the usual practice of the impartial price adjuster to set four separate rates on each style of garment, to wit, for the operating,

for the finishing, for the under pressing, and for the off or final pressing. The finishing and pressing operations do not vary greatly with the changes in styles and are seldom the cause of serious piece-rate controversies. Only occasionally are the services of the impartial price adjuster required to establish piece rates for finishing or pressing. Where the employer and his price committee of employees are unable to agree such rates are usually set by the two officials representing the employer and the unions. The most serious controversies regarding piece rates occur in connection with the operating processes, for the reason that changes in styles affect the amount of labor involved in the operating far more than they affect the amount involved in finishing and pressing.

No time studies to determine the actual amount of labor involved in specific operations are ever made. As a matter of fact, however, specific time allowances, acquiesced in by both parties and utilized by the impartial adjuster in the determination of piece rates, do exist, although not committed to writing. Rates based upon established and mutually satisfactory time allowances exist for all of the basic operations on cloaks and suits, such as the making of plain bodies, ordinary collars, sleeves, belts, buttonholes, sewing on plain trimmings, pockets, etc. Basic standard piece rates, definitely acquiesced in by both parties, exist also for all the finishing and pressing operations. All these are in force from season to season and vary only with the so-called "qualitative" character of the establishment. The establishments under the agreement are unofficially classified, according to the general quality of their merchandise, into "cheap," "medium," "good," and "high grade" shops; the higher the quality of the shop the higher the piece rate set for the same basic operation. This qualitative classification of shops has been in operation in the trade so long that controversies regarding it seldom arise.

In setting a new rate each specific new feature is carefully and separately examined and a time allowance on it established. The method of appraising each minor feature separately has, it was said, a tendency to counterbalance errors made; an overestimate in the time allowance on one may easily be compensated by an underestimate on another. The amount of time required to make the standardized parts of the garment, known in advance, is supplemented by an estimate of the aggregate time required to make all the features. The sum total of time thus arrived at is multiplied by the hourly rate specified in the agreement, and the result constitutes the final piece rate set by the adjuster.

It was declared repeatedly by persons concerned in these adjustments that the personality of the adjuster determines to a great ex-

tent the confidence of the persons affected in the fairness of his decisions, and thus ultimately the success or failure of the entire system of piece-rate making. During the first six months of the application of the system not less than five adjusters were found unsatisfactory and were discharged. Besides enjoying the confidence of employer and employee, the adjuster, it is said, must be an expert at the trade and possess considerable tact and diplomatic ability, as arbitrary methods in the handling of such matters are extremely undesirable and are to be used only as a last resort.

The trade expertness of the present adjuster enables him to arrive at his decisions independently, and there is therefore no tendency on his part "to split the difference" as is sometimes done by industrial arbitrators. This fact is repeatedly referred to by employers and employees as being responsible for their confidence in the fairness of his adjustments. It is stated that the piece rates set by him, although based upon estimates, usually enable the workers to earn easily the hourly rates specified in the agreement without compelling the manufacturer to cease the production of the garment because the labor cost set upon it by the impartial adjuster would make its manufacture unprofitable.

Although the rates set by the impartial adjuster are objected to from time to time by one of the parties, the number of such instances on record is small. Generally speaking, it may be stated that thus far no great difficulties have been experienced by the respective organizations in making the parties to the controversies comply with his decisions. The confidence of the employees in the fairness of the scheme is greatly augmented by the fact that the decisions of the impartial adjuster are final. The finality of the adjudication makes it impossible for the controversy to "drag on too long."

DRESS AND WAIST INDUSTRY.[1]

A general strike, which lasted for about 10 weeks, took place in the dress and waist industry in Chicago in 1916. The strike was carried on under the auspices of the International Ladies' Garment Workers' Union, because the workers of the trade were organized in 1915 as its Local No. 100.

At the time of the declaration of the strike, the union presented the following demands: (*a*) A 48-hour week; (*b*) 6 working days per week; (*c*) restriction of overtime; (*d*) 7 legal holidays annually with pay to week workers; (*e*) equal distribution of work during

[1] Unlike the dress and waist industry of New York City, which is highly specialized and confined exclusively to the manufacture of dresses and waists, the Chicago dress and waist industry manufactures also house dresses, kimonos, and white goods. It is estimated that the industry at the present time employs about 7,000 workers.

dull seasons; (*f*) minimum weekly and hourly rates of wages;[1] (*g*) safe and sanitary workshops; (*h*) union recognition and the application of the preferential union shop; (*i*) the presence in each establishment of a representative of the union elected by the workers; (*j*) election by the workers in each establishment of a piece-rate committee to settle piece prices with the employer; (*k*) prohibition of strikes and lockouts; (*l*) peaceful adjustment of grievances by a committee on adjustment to consist of three members, one representing the workers, one the employer, and an umpire selected by mutual consent; (*m*) the maintenance by contractors employed by members of the employers' association of labor standards equivalent to those demanded of the employers themselves.

While the strike was in progress the union modified some of its demands, particularly those referring to minimum rates for week workers. The original demands were in most instances reduced by $1 and, for some occupations, by $1.50 per week.

At the beginning of the strike as well as while it was in progress the workers were ready and willing to submit their demands to arbitration. The employers, however, flatly refused to have any dealings with the union. Efforts made by local public authorities, as well as by a representative of the conciliation division of the Federal Department of Labor, were without avail. The employers applied to local courts for the issuance of injunctions to restrain the union from picketing and from paying strike benefits. Four injunctions were thus obtained. These resulted in wholesale arrests of picketers and members of the union and finally broke the resistance of the workers.

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[1] The following table shows the rates of wages demanded:

Occupation.	Weekly rates demanded in—	
	Waist, dress, and skirt industry.	Kimonos and white goods industry.
Cutters:		
Full fledged	$27.50	$22.00
4 years' experience	25.00	(a)
3 years' experience	22.50	20.00
2 years' experience	20.00	17.00
1 year's experience	17.00	15.00
Pressers	23.00	(b)
Sample makers	16.00	(b)
Examiners	13.00	(b)
Finishers	12.00	(b)
Cleaners	9.00	(b)
Operators	c.40	c.35

a No rate. b 20 per cent increase. c Per hour.

The union has at the present time no trade agreement with the organized manufacturers of the dress and waist trade of Chicago. It has, however, 42 trade agreements with as many establishments, the owners of which do not belong to any employers' association. The 42 establishments in question employ about 800 workers, and are distributed as follows: Dresses and skirts, 31 shops; kimono and house dresses, 8 shops; waists, 3 shops. The terms of the agreements with the individual establishments are essentially the same as those demanded by the union from the organized employers.

WATERPROOF-GARMENT INDUSTRY.

This industry employs about 600 workers. The raincoat makers, who constitute the principal group of workers in the trade, are organized as local 54, of the International Ladies' Garment Workers' Union. This local has, at the present time, six trade agreements with as many employers, employing in the aggregate about 200 workers.

The trade agreements are in writing. Each is to run for one year from the date of signing, and provides for the following: (1) Employment of none but members of the union; in cases of inability of the union to supply the needed help, employers are permitted to hire nonunion workers, provided the latter are willing to join the organization; (2) 49-hour week; (3) restriction of overtime; (4) time and one-half for overtime, and double time for Sunday work; (5) five legal holidays annually, with pay; (6) except during the first eight days of employment, no workers are to be discharged without sufficient cause, said cause to be communicated to the union office; (7) business agent of the union to have free entrance into employers' shops at any time on legitimate business; (8) specific minimum rates of wages; (9) equal division of work during dull seasons; (10) safe and sanitary workshops in accordance with the State laws; (11) nonemployment of workers under the age of 16; (12) prohibition of strikes and lockouts; (13) peaceful adjustment of all differences by a committee of two representing the union and the employer, and in instances of failure to agree, by a third and impartial person satisfactory to both sides.

The six agreements cover slightly over one-third of the waterproof-garment workers of Chicago, the remaining two-thirds being employed in one establishment, which is, at the present time, manufacturing military raincoats. This establishment is employing nonunion help, mostly girls, and does not maintain union conditions of labor. As a matter of fact, by the introduction of an elaborate sub-

division of labor, it has done away altogether with the services of skilled raincoat makers.

The fact that the latter establishment—the largest and the leading one of the trade—is securing relatively lower labor costs by the employment of nonunion help constitutes, in the opinion of the union officials, a perpetual menace to the existence of the raincoat-makers organization. Some of the employers, who at the present time are dealing collectively with the union, have informed the latter that unless the greater portion of the trade is unionized and labor rates throughout the industry are equalized, they will not in the future be in a position to renew the existing agreements.

LABOR AND THE WAR.

UNIFORMITY IN FEDERAL LABOR POLICY.

In order that labor policies may be made uniform all agencies for the provision, distribution, housing, and otherwise caring for workmen in war industries have been centered in the Department of Labor and the Secretary of Labor made in effect the labor administrator of the Government. This program of war-labor administration has been formulated as a result of conferences between the Department of Labor and the Council of National Defense, and has the approval of the President.

Among the agencies which are already in existence within the Department of Labor for carrying out the work are the following: (1) System of labor exchanges; (2) machinery for the adjustment of labor disputes; and (3) investigating bodies, as, for example, the Bureau of Labor Statistics. New agencies will be provided (1) for the training of workers; (2) for determining priority of labor demands; (3) for dealing with the dilution of skilled labor; (4) for securing proper conditions of labor; (5) for safeguarding living conditions, including housing and transportation; and (6) for purposes of publicity.

Supplementing these agencies the Secretary of Labor, as proposed, has called to his assistance an advisory labor council, i. e., a corps of advisers and administrators representing capital, labor, and the public.

The members of the advisory council have been appointed by the Secretary. Representing the public are ex-Gov. John Lind, of Minnesota, and Prof. L. C. Marshall, of the University of Chicago; representing employing interests are Mr. Waddill Catchings, of New York and Alabama, president of the Sloss-Sheffield Steel & Iron Co., and Mr. A. A. Landon, of Buffalo, N. Y., general manager American Radiator Co.; and representing labor are Mr. John B. Lennon, ex-president of the International Tailors' Federation, and Mr. John J. Casey, former United States Representative from Pennsylvania. Miss Agnes Nestor, president of the Chicago Women's Trade-Union League, represents the interests of women workers.

Unity of action between the departments of the Government in labor matters is assured by the intention of the Secretary to increase

the membership of the council by the appointment of representatives from the War and Navy Departments and from the Shipping Board.

STATEMENT BY THE COUNCIL OF NATIONAL DEFENSE.

The statement issued by the Council of National Defense is as follows:

As a result of a series of conferences on the subject of labor policies, the Council of National Defense submitted to the President a program for war-labor administration. This program has been approved by the President and he has, accordingly, requested the Secretary of Labor to undertake this administration and to provide for this purpose the following agencies:

1. A means of furnishing an adequate and stable supply of labor to war industries. This will include:

(*a*) A satisfactory system of labor exchanges.

(*b*) A satisfactory method and administration of training of workers.

(*c*) An agency for determining priorities of labor demand.

(*d*) Agencies for dilution of skilled labor as and when needed.

2. Machinery which will provide for the immediate and equitable adjustment of disputes in accordance with principles to be agreed upon between labor and capital and without stoppage of work. Such machinery would deal with demands concerning wages, hours, shop conditions, etc.

3. Machinery for safeguarding conditions of labor in the production of war essentials. This is to include industrial hygiene, safety, women and child labor, etc.

4. Machinery for safeguarding conditions of living, including housing, transportation, etc.

5. Fact-gathering body to assemble and present data, collected through various existing governmental agencies or by independent research, to furnish the information necessary for effective executive action.

6. Information and education division which has the functions of developing sound public sentiment, securing an exchange of information between departments of labor administration, and promotion in industrial plants of local machinery helpful in carrying out the national labor program.

Some of these agencies already exist in part in the Department of Labor. For example, the mediation service, the system of labor exchanges, and the Bureau of Labor Statistics can be utilized to the extent they are found useful in carrying out the new program.

It is the purpose of the Secretary of Labor to undertake the work outlined above on an adequate scale. He will call to his assistance as advisers and administrators a well-balanced corps of men of high standing, representing capital, labor, and the public. These persons will assist him in formulating and efficiently executing policies which will command the approval and support of employers, employees, and the public throughout the United States. The Secretary and his advisers will give early attention to the question whether congressional action shall be requested.

The Secretary of Labor will bring this new service into touch with the needs of the various departments of Government, including the Shipping Board, in order that labor policies may be made uniform and that the service thus established under the President's order shall adequately meet the needs of the present emergency.

PROGRAM OF THE ADVISORY COUNCIL APPROVED BY THE SECRETARY OF LABOR.

On January 16 announcement was made of the appointment of the advisory council. The council at once began sessions, and on January 28 its program of labor administration was approved by the Secretary of Labor. This program may be outlined as follows:

AGENCIES OF ADMINISTRATION.

A broad outline of the administration of the new work provides for the organization of six new agencies or services within the Department of Labor, in addition to the three industrial-service agencies which are already in existence and ready to function for the purposes in hand. The six supplementary services or agencies to be created, in addition to the conciliation service, the United States Employment Service, and the investigating bureaus of the department, are the following:

1. A Conditions of Labor Service to administer conditions of labor within business plants, such as safety, sanitation, etc.
2. An Information and Education Service to promote sound sentiment and to provide appropriate local machinery and policies in individual plants.
3. A Woman in Industry Service to correlate the activities of various agencies dealing with this matter.
4. A Training and Dilution Service.
5. A Service of Housing and Transportation of Workers.
6. A Service of Personnel (which may possibly be fused with the Information and Education Service.)

The scheme of organization accepts the continuance of such agencies as the industrial-service sections of the Bureau of Ordnance, the Shipping Board, the Quartermaster Corps in the War Department, and of such other departmental bureaus as may have set up satisfactory industrial-service sections as a part of their own organization. The facilities of these bureaus will be utilized, but their activities will be centralized and cleared through the appropriate controlling sections of the Department of Labor.

PLAN OF ORGANIZATION.

The administration is centralized under the Secretary of Labor. The Secretary will be assisted by his "policies board," made up of his advisory council, the heads of the industrial service sections of other governmental departments or bureaus, and the heads of the existing bureaus of his own department.

The industrial service sections of the other governmental departments or bureaus are to be organized on the same general scheme that governs the organization of the new service sections established within the Department of Labor. The chiefs of the various subsections of the industrial service sections of the other governmental departments will clear their activities through the head of the appropriate service established in the Department of Labor.

The general plan of utilizing the functions of the different industrial service sections in other governmental departments which are now in existence or will be created has back of it certain fundamental reasons:

A. It will be possible to get under way with the new administration much more rapidly if existing agencies are utilized than it will be if they are

supplanted. Promptness in getting under way is desirable both as a means of deserving the confidence of other departments of Government and as a means of facilitating the successful conduct of the war.

B. The departments of Government which have set up or which may set up industrial service sections have entered into contracts with various firms. In many cases these contracts are so drawn as to give these departments a very considerable control of the conduct of the plants. This is particularly significant in the case of labor matters. More efficient action in dealing with these firms on labor matters can, of course, be secured by the contracting department than by some other department.

C. These industrial-service sections are rapidly acquiring an efficient personnel. It is not too much to say that they are combing the country for the best men in certain lines. It will be much easier to retain this personnel in the existing organization than it will be to transfer it to another, and the personnel problem is a very serious one in labor administration.

D. Quite aside from their industrial-service sections, as such, these other departments have in their inspection forces a large personnel which can be used, and, indeed, is being used, in labor administration. For example, in the Ordnance Department their inspectors make daily or semiweekly or weekly reports concerning conditions of living, conditions of labor, labor turnover, etc. These inspection staffs could not be used to as good advantage if the administration of labor were divorced from the administration of production.

E. The system of control charts established by such bureaus as Ordnance furnishes accurate data on which administrative action may be taken, in that these charts make possible the determination of the precise character of difficulties which arise in industrial plants. It is not too much to say that very heavy expenditures by an agency outside of these production departments could not secure as accurate information concerning conditions as can be secured in ordinary administrative routine within the production department itself. This is only another way of emphasizing the fact that we must think not in vague terms of "labor," but in terms of "labor in production."

F. The plan proposed accords with generally approved theories of business administration. It secures the necessary *centralization of control* together with the wise *decentralization of administration* by agencies *which come into direct touch with the problem at issue.*

G. The plan in no way limits the freedom of the Department of Labor to set up such supplementary agencies as may be necessary. There will accordingly result a well-rounded administration and not a piecemeal administration.

H. The plan definitely locates responsibility and power of decision. These rest with the Secretary of Labor. The various activities of the industrial service sections of other departments are cleared through the bureau heads of the Department of Labor.

I. The plan is flexible in character. If, as time goes on, it should appear that these sections should lose their identity and thus become *merged* in an administration under the Department of Labor, there is nothing to prevent such action being taken. On the contrary, fusion would have been facilitated by a period of teamwork.

IMPORTANCE OF THE NEW WORK.

The advisory council states that a perfect administration of labor matters in accord with the plan outlined above is not sufficient to meet the emergency which faces the country, and continues:

"Labor matters do not stand by themselves. They are phases of production, and no centralized administration of labor can be adequate which does not go hand in hand with the centralization of administration of production, and failure to secure such centralization spells failure to secure a sound situation in labor, and failure to prosecute the war vigorously."

FARM-LABOR SPECIALISTS TO AID FARMERS IN SECURING HELP.[1]

To cooperate effectively in the farm-labor problem with the United States Department of Labor, State councils of defense, State commissioners of agriculture and labor, and other official State and local agencies concerned with supplying needed farm labor, the Department of Agriculture has divided the country into four farm-labor divisions: (1) New England and Northeastern States, (2) Southern States, (3) North Central States, and (4) Western States.

Each of these divisions is in charge of a representative of the Department of Agriculture, known as a supervising farm-help specialist, who supervises the work of the department's farm-help specialists assigned to the farm-labor work in single States or two or more adjoining States. These farm-help specialists will cooperate directly with State agencies, central and local employment agencies of the United States Department of Labor, and with the county agents and community farm-help committees.

The farm-help specialists through preliminary labor surveys will endeavor to ascertain the prospective needs for extra labor in each community. They will work with State and local agencies to supply labor deficiencies from local supplies, if possible, or from the nearest point where labor can be secured. All local sources of labor first will be drawn upon. In cases of necessity, however, arrangements will be made, through the Department of Agriculture and the Department of Labor, for interstate movement of help.

It is pointed out that the farmer in need of labor should proceed as follows: He should report his need to his county agent or to a member of the community farm-help committee. If possible, his need will be supplied from lists of men available in the county. If local labor is inadequate, the county agent or committee will report to the State farm-labor specialist, who, in cooperation with the State officials, will draw on the nearest available labor within the State.

The plan contemplates appointing a State farm-help specialist for each of the large agricultural States.

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[1] From Official Bulletin for January 10, 1918.

HOURS OF LABOR IN RELATION TO OUTPUT IN BRITISH MUNITION FACTORIES.[1]

In Memorandum No. 20 on "Weekly hours of employment," issued under date of October, 1917, by the health of munition workers committee of the British ministry of munitions, it is urged "that the time is now ripe for a further substantial reduction in the hours of work." In view of the importance of this subject in connection with labor conditions in the United States, the text of this memorandum is given herewith in full.

WEEKLY HOURS OF EMPLOYMENT.

MEMORANDUM No. 20.

1. The committee have had under consideration the recommendations made in regard to the maximum weekly hours of employment of men, women, and young persons, which were set out in their Memorandum No. 5 on "Hours of work" (issued January, 1916). When the committee commenced their labors, two years ago, they were faced with an almost complete absence of any scientific data as to the relation of hours of employment to output. They had accordingly to rely upon the general evidence of employers, workers, and other persons of experience. As explained in Memorandum No. 1 on "Sunday labor," this evidence was practically unanimous as to the need for a weekly period of rest. There was, however, revealed a marked divergence of opinion as to the limits within which weekly hours of employment should be kept. It was a matter of urgent importance that some guidance on this subject should be offered forthwith. On the other hand, it was clear that in the absence of exact and reliable data any recommendations put forward at that time must necessarily be tentative and provisional in character. Moreover, if they were to be of practical value and to secure any wide measure of acceptance it was necessary that they should satisfy two essential conditions. First, they had to be such as would be regarded as reasonable and moderate by the great mass of employers and workers, and in the second place, while taking account of the probable duration of the war, they had to have regard to the immediate urgency of output at the time. Any recommendations which might involve even a temporary diminution of output would have been doomed to failure. It was evident, in fact, that any reduction of hours proposed must be gradual, and the committee accordingly based their recommendations on what appeared

[1] Health of munition workers committee, ministry of munitions. Memorandum No. 20. Supplementary to Memorandum No. 5 (hours of work). Weekly hours of employment, October, 1917 [Cd. 8801]. 7 pp. Price, 1d. net.

Of the previous memoranda on the subject of hours of labor and output, the following are reproduced in Bulletin 221 of this bureau: Memorandum No. 1, Sunday labor; Memorandum No. 5, Hours of work; Memorandum No. 12, Statistical information concerning output in relation to hours of work (report by H. M. Vernon, M. D.). In Bulletin 230 are reprinted portions of an interim report (February, 1917) of the Health of Munition Workers Committee, which relate to "The comparative efficiencies of daywork and night work in munition factories" and "The causes and conditions of lost time," the latter by Thomas Loveday, M. A. A summary of Memorandum No. 18, "Further statistical information concerning output in relation to hours of work, with special reference to the influence of Sunday labor," is given in the MONTHLY REVIEW for November, 1917, pp. 61 and 62.

to be immediately practicable rather than on what was ultimately desirable or might be defensible on a physiological basis. Further, they found it necessary to confine themselves to suggestions as to the maximum limits within which employment should be restricted, and they did not endeavor to set out the extent to which, in their opinion, it was necessary or desirable to reduce these limits to meet varying industrial conditions.

2. The committee are of opinion that their cautious action and advice has been justified by events, and they are glad to take the present opportunity of recognizing the sympathy with which their recommendations were received, as well as the active and continuous efforts which have been made by the departments concerned to secure their general adoption. The limits of the weekly hours of employment then suggested were—

(*a*) For men, that the average weekly hours of employment should not exceed 65–67 (exclusive of meal times), i. e., a 13–14-hour working day.

(*b*) That boys under 18 should be allowed to work the same hours as men, provided that—

(1) The hours of boys under 16 should be limited to 60, so far as possible.

(2) Substantial relief at the week ends should be insisted on.

(3) Night work should be limited, as far as possible, to boys over 16.

(*c*) That for women and girls employment should be restricted within the normal legal limit of 60, i. e., a 12-hour working day, though within these limits moderate daily overtime might be allowed, and that the employment of girls under 18 at night should be limited as far as possible.

3. The committee are of opinion that the time has now come when these recommendations may properly be reviewed in the light of the following facts: First, the experience gained and the new evidence collected during the past two years; secondly, the strain involved by three years of war conditions, a strain which is likely still to continue for a considerable period; and, thirdly, the rapid increase in the number of women workers and in the variety of processes on which they are employed.

4. From the commencement of their work the committee have attached the highest importance to the collection of exact data affecting the problems at issue. The field to be covered is a very wide one, while the process of collection is slow and laborious. The committee, however, consider that the data which have already been collected on their behalf by Dr. Vernon and others are of great practical value and merit the most serious attention. The results of these investigations are the more valuable in that they have been undertaken solely in a spirit of scientific investigation and with no preconceived opinions. The selection of factories for inquiry was based solely on the likelihood of reliable data being forthcoming. Further, in none of the operations studied was there any change in the nature of the operation or the type of machinery during the period under review. The data were so chosen as to eliminate any possible disturbance due to increasing skill. There is no reason to suppose that the data quoted below were vitiated by any artificial restriction of output.

5. The results of Dr. Vernon's investigations, which covered a period of over a year, are set out in memorandum No. 18. Although that memorandum has already been submitted to the ministry and published, it appears desirable shortly to set out again the principal results of his investigations in so far as they concern the relation of weekly hours of employment to output. The following are the four sets of data which bear on this subject:

(A) WOMEN TURNING ALUMINIUM FUSE BODIES.

	Average weekly hours.		Relative hourly output.	Relative total output.
	Nominal.	Actual.		
First period	74.8	66.2	100	100
Second period	61.5	54.8	134	111
Third period	54.8	45.6	158	109

During the first period Sunday work (eight hours) was done on five out of six Sundays; during the second on three out of eight, the nominal weekly hours in these three weeks being 66.5 instead of 58.5, an average of 61.5; during the third period the timekeeping was bad, the normal weekly hours of work averaging about 55. Dr. Vernon accordingly suggests that with good timekeeping a nominal 50-hour week ought to yield the same actual hours of work (namely, 45.6); that is to say, that for women engaged in moderately heavy lathe work a 50-hour week yields as good an output as a 66-hour week and a considerably better one than a 75-hour week.

(B) WOMEN MILLING A SCREW THREAD.

	Average weekly hours.		Relative hourly output.	Relative total output.
	Nominal.	Actual.		
First period	71.8	64.9	100	100
Second period	64.6	54.8	121	102
Third period	57.3	48.1	133	99

Dr. Vernon explains that the reason why a reduction of hours did not lead to an improvement of total output similar to that in the fuse-body turning operation is that for four-fifths of the total time required to mill the screw thread on the fuse body the operative had no opportunity of quickening her working speed, since she had merely to stand idly watching her machine, whereas the lathe worker had to apply seven different cutting and boring tools in succession to each fuze body, and could quicken up her speed of work at almost every stage.

(C) MEN ENGAGED IN HEAVY WORK.

	Average weekly hours.		Relative hourly output.	Relative total output.
	Nominal.	Actual.		
First period	66.7	58.2	100	100
Second period	62.8	50.5	122	106
Third period	56.5	51.2	139	122

It should be noted that during the third period the nominal weekly hours were about 5–6 less than during the second period. Owing to the cessation of Sunday labor the timekeeping was so much improved that the actual hours of work were greater than during the previous period.

(E) BOYS BORING TOP CAPS.

	Average weekly hours.		Relative hourly output.	Relative total output.
	Nominal.	Actual.		
First period	78.5	72.5	100	100
Second period	61.5	54.7	117	88
Third period	60.5	54.5	129	97

Increase of output in this process, which is largely automatic, could only be attained by a more continuous feeding of the machines throughout working hours.

6. The above data show that a reduction in the weekly hours of actual work, varying from 7 to 20, in no case resulted in more than an insignificant diminution of total output, while on the average it produced a substantial increase. As Dr. Vernon points out, the classification of the operations according to the possibility they offer for speeding-up production demonstrates anew the self-evident fact that the alterations of hours may have very different effects in different operations. The exact measure of such alterations can not be predicted; it can only be ascertained by observation and experiment. It appears evident, however, that for processes similar to those examined by Dr. Vernon, the weekly hours can advantageously be reduced to a total of from 50 to 55, and he suggests that even lower limits might give an equally good output.

7. Two further points of importance emerge from consideration of these data. In the first place, the rate of production changed gradually, and frequently four months elapsed before an equilibrium value was reached. This gradual change appears to nullify the suggestion that the effect upon output of the change of hours was a mere consequence of the desire to earn the same weekly wages as before the hours were shortened. The explanation is rather to be traced to the worker finding unconsciously and gradually by experience that he can work more strenuously and quickly for a short-hour week than for a long-hour week. In the second place, the evidence suggests that a considerable increase in the average hourly output is possible, quite apart from any increased rapidity of working. Thus, as the result of special investigations, Dr. Vernon found that in the case of the first body of workers mentioned above the time lost in commencing and stopping work during the first period averaged 37 minutes as compared with only 26½ minutes during the third period.

8. Prof. Loveday, in his memorandum on the "Causes and conditions of lost time," which is included in the committee's interim report on "Industrial efficiency and fatigue,"[1] also supplies valuable data of a somewhat similar character. In the first place, he points out that the proportion of lost time that is due to sickness and other unavoidable causes is, as a rule, greatly underestimated in factory records and the proportion due to slackness consequently overestimated. In the second place, he expresses the view that long hours, much overtime, and especially Sunday labor exert a pernicious effect upon health, particularly of persons occupied in heavy trades. In paragraph 33 (5) of that memorandum he gives two tables, the first dealing with a body of about 180 men and the second with between 300 and 400 men employed on heavy work, their normal hours being from 65 to 70. In both these cases, when comparison is made with the figures of lost time for June, 1915, and for a year later, the fact emerges that there was a material increase in the amount of lost time and

[1] Cd. 8511.

that by far the larger portion of the increase was due to recorded sickness. In both cases throughout recorded sickness represented a noticeably high proportion of the total amount of time lost.

9. Prof. Loveday also devoted considerable space to the examination of figures concerning the amount of time lost before breakfast. He concludes:

(*a*) That if early hours be worked, the loss is likely to decrease if the start be later than 6 a. m.

(*b*) That when the total hours of the day-shift week are the same, there are likely to be more hours actually worked without than with work before breakfast, other conditions being similar.

(*c*) That a reduction of hours may be compensated for or even outweighed by the abolition of early hours, partly owing to reduced absences, partly owing to reduced waste of time, and partly to the greater vigor of work after taking food.

He quotes figures for a number of different factors which confirm these conclusions. He strongly presses the view that food should precede work. He points out the undesirability of hunger work, its bad effect upon health, and the temptation to lose time in the short early spells.

10. There can be little doubt that there is an increasing recognition on the part of both employers and workers of the broad fact which emerges from the investigations of Dr. Vernon and Prof. Loveday, namely, that substantial reduction of hours can be effected without any reduction of output. Whereas at the beginning of the war there was a general belief that longer hours necessarily produced larger output, it has now become widely recognized that a 13 or 14 hours' day for men and a 12 hours' day for women, excepting for quite brief periods, are not profitable from any point of view. Few, probably, would disagree with the statement contained in the summary prepared by the Right Hon. G. N. Barnes, M. P., of the recent reports of the commissions on industrial unrest that—

"There is a general consensus of opinion that Sunday and overtime labor should be reduced to a minimum, that holidays should not be curtailed, and that hours of work should not be such as to exclude opportunities for recreation and amusement."

It must be obvious that any reduction of hours which can be accomplished without loss of output is profitable not only to the employer, in that it reduces running expenses, but to the worker, since even if his or her daily measure of work involves the same amount of fatigue a longer period is left for recovery and for the enjoyment of adequate sleep and recreation.

11. It must be recognized that the conditions are not the same now as they were in the early days of the war; not only have large numbers of the youngest and strongest workers been withdrawn for military service, but those who remain are suffering from the strain inseparable from a continuous period of long hours of employment. To this must be added the strain caused by family and other anxieties arising out of the war. While much has been done to improve conditions of employment they are still in many cases far from ideal, notably as regards housing and transit. Further, large numbers of women are now employed on heavy work and on skilled operations involving constant thought and attention, which were considered two years ago to be quite beyond their capacity. It may be true that no serious breakdown of health has as yet been observed among the great mass of the workers, but it can not be assumed that this condition will continue indefinitely. The effects of the strain may even have been already more serious than appears on the surface, for while it is

possible to judge roughly the general condition of those working in the factory to-day, little information is available concerning the large number of workers who for one reason or another, and often because they find the work too arduous, are continually giving up their job. This is an important point which is liable to be overlooked, since the supply of labor has hitherto been adequate to fill their places. The irritability and nervousness mentioned by the commissions on industrial unrest are moreover well recognized symptoms of fatigue, while it must not be forgotten that the effects of fatigue are accumulative.

12. After careful consideration of all the circumstances, the committee are convinced that the maximum limits of weekly employment provisionally suggested are too high except for quite short periods, or perhaps in cases where the work is light and the conditions of employment exceptionally good. In the great majority of cases, however, the hours of work should now be restricted within limits lower than those quoted in paragraph 2 above. It is impossible to lay down a single rule as to the best hours in all cases; the best scheme can only be determined after a careful consideration of a number of different factors, e. g.—

(*a*) The strain involved in the work, its character (heavy or light, continuous or intermittent) and the mental demand which it makes upon the worker.

(*b*(The extent to which the pace of the work is governed by the machine.

(*c*) The factory environment—temperature, ventilation, etc.

(*d*) The individual physical capacity of the workers, and their age, sex, and experience.

(*e*) The organization of the factory (including welfare supervision.)

(*f*) The sufficiency and suitability of the worker's food, canteen accommodation, etc.

(*g*) The arrangements of the hours of work (spells, breaks, and pauses).

(*h*) Conditions outside the factory—e. g., housing and transit.

In arranging the hours of work for a factory, allowance should be made, as far as discipline and organization permit, for the fact that the best hours of employment will not be the same for all processes, even in the same factory.

13. In conclusion the committee desire to urge the view that the time is now ripe for a further substantial reduction in the hours of work. If this be effected with due regard to the varying conditions prevailing in different branches of industry, they are satisfied that reductions can be made with benefit to health and without injury to output.

Signed on behalf of the committee.

GEORGE NEWMAN, M. D., *Chairman.*

E. H. PELHAM, *Secretary.*

OCTOBER, 1917.

CHANGES IN OCCUPATIONS OF WOMEN AND GIRLS IN GREAT BRITAIN DURING THE WAR.[1]

An analysis has been made of the prewar occupations of 524,000 women and girls to whom unemployment books were issued up to January, 1917, under the National Insurance (Part II) Munition Workers Act of 1916. Of these 444,137 (380,470 women and 63,667 girls) stated their occupations definitely enough to make a tabulation possible. In the following table the numbers insured in

[1] The Labour Gazette, London, December, 1917, p. 438.

different groups of trades at January, 1917, are classified so as to show their prewar occupations:

Prewar occupations.	Occupations at January, 1917.				
	Metal trades (excluding engineering).	Chemical trades (including small arms).	Clothing trades.	Other trades.	All insured trades.
Same trade	53,249	14,634	38,256	30,399	136,538
Household duties, and not previously occupied	18,927	52,407	9,334	17,843	98,511
Textile trades	3,408	6,226	1,000	4,374	15,008
Clothing trades	4,635	17,941	8,430	8,787	39,793
Other industries	12,458	20,879	5,745	10,065	49,147
Domestic service	12,502	44,438	4,970	12,062	73,992
Other nonindustrial occupations	5,449	17,079	3,643	4,977	31,148
Total insured	110,628	173,604	71,378	88,507	444,137

Subtracting the number of persons who have remained in the same trade it will be seen that the table accounts for nearly 308,000 persons who have changed their occupations. In July, 1917 (the latest date for which figures are available), the numbers of women drawn into industrial work, using the term to include Government establishments, was 720,000, or rather more than double the number drawn into the trades here considered. The proportion of the total increase covered by these figures is therefore sufficiently large to be taken as fairly typical. Assuming that the whole of the increase of 720,000 could be accounted for in the same manner as the increase analyzed above, it would mean that it was made up of 231,000 women and girls who were previously unoccupied, 173,000 who were domestic servants, 243,000 who came from other industries, including 93,000 from the clothing trades, and 73,000 from nonindustrial occupations other than domestic service. These figures can, of course, only be taken as a rough indication of the change that has taken place, but they must be sufficiently near the truth to be of considerable interest.

The fact that so many persons have left a trade can not be taken to indicate that the numbers employed have decreased by an equal amount, as these trades in their turn have drawn in workers from the outside. Thus, in January, 1917, at the date to which these figures refer, taking the clothing trades as a whole, the numbers of women and girls employed had decreased by 32,000, whereas it appears from the above table that the newly insured trades alone had drawn in nearly 40,000 females from the clothing trades, which must therefore have found at least 8,000 workers from outside. In the textile trades the loss shown in the table is 15,000, although at

that time the textile trades had increased the numbers of female employees by 25,000.

To turn to the individual trades insured under this act, by far the largest are the chemical trades, under which heading the manufacture of explosives and small arms is classified, and which, consequently, include large numbers of women in Government establishments. Next to these in size come the metal trades; but it must be remembered that persons engaged in the engineering trades were already insured under the act of 1911, and consequently, are not included in the above figures. The figures for the chemical trades, on the other hand, cover the large majority of women who are now working in those industries, and are therefore of very considerable importance. It is noticeable that they have drawn in workers from other industries to a far greater extent than the metal trades. This is illustrated more clearly in the following table, which shows what percentage of the total classified for each group of insured trades had been previously employed in the same occupation and what percentage had been drawn from the various other occupations.

Prewar occupations.	Occupations at January, 1917.				
	Metal trades.	Chemical trades.	Clothing trades.	Other trades.	All insured trades.
Same trade	48.1	8.4	53.6	34.3	30.7
Household duties, and not previously occupied	17.1	30.2	13.1	20.2	22.2
Textile trade	3.1	3.6	1.4	4.9	3.4
Clothing trade	4.2	10.3	11.8	9.9	9.0
Other industries	11.3	12.0	8.0	11.4	11.1
Domestic service	11.3	25.6	7.0	13.7	16.6
Other nonindustrial occupations	4.9	9.9	5.1	5.6	7.0
Total insured	100.0	100.0	100.0	100.0	100.0

It will be seen that 48.1 per cent of the women and girls in the metal trades insured under the act had been previously employed in the same trade, 51.9 per cent being drawn in from other occupations. In the chemical trades, on the other hand, as many as 91.6 per cent of the total had come from other occupations. The difference in this respect between the two trades is, of course, due to the great developments in the manufacture of explosives and in the filling factories, in which much of the work is entirely new, or on which only a very small number of persons were engaged before the war. The chemical trades have, therefore, been forced to recruit largely from outside; over 30 per cent of the total employed were unoccupied before the war or were engaged in household duties, nearly 26 per cent were drawn from industries, and an almost equal number from domestic service. If all the insured trades be taken together, 31 per

cent of the women classified had not changed their occupations, 22 per cent were previously unoccupied or were engaged in household duties, 23 per cent came from other industries, and 17 per cent from domestic service; that is to say, of the women and girls then employed in the munition trades which come under the insurance act over half of the total had been previously unoccupied or had been in the same trades, while nearly a quarter had had other industrial experience, the remainder being drawn from nonindustrial occupations, primarily domestic service.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

PRICES IN DETAIL, DECEMBER, 1917.

The increase in the retail price of food, as a whole, in December, 1917, over November, 1917, was 1 per cent. Of the 27 articles for which prices are received by the Bureau of Labor Statistics, 8 articles decreased in price, 3 remained the same, and 16 increased as compared with the prices for November.

Onions show the greatest decrease, or 14 per cent; bread decreased 5 per cent; potatoes 3 per cent; pork chops, flour, and prunes 2 per cent each. Sugar and beans each show a decrease of 1 per cent. Eggs show the greatest increase, or 9 per cent. Butter and hens each increased in price 3 per cent. Rice, milk, lard, and chuck roast each show an increase of 2 per cent.

The following table shows the course of prices in the United States in November and December, 1917:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON NOV. 15 AND DEC. 15, 1917.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1916.]

Article.	Unit.	Average money price.		Relative price.	
		Nov. 15, 1917.	Dec. 15, 1917.	Nov. 15, 1917.	Dec. 15, 1917.
Sirloin steak	Pound	$0.317	$0.320	116	117
Round steak	do	.296	.300	121	122
Rib roast	do	.250	.253	118	119
Chuck roast	do	.212	.215	123	125
Plate beef	do	.163	.164	127	128
Pork chops	do	.345	.338	152	149
Bacon	do	.482	.487	168	170
Ham	do	.426	.435	145	148
Lard	do	.326	.333	186	190
Hens	do	.295	.304	125	129
Salmon, canned	do	.287	.290	142	144
Eggs	Dozen	.581	.634	155	169
Butter	Pound	.528	.543	134	138
Cheese	do	.346	.345	134	134
Milk	Quart	.128	.131	141	144
Bread	16-oz. loaf[1]	.088	.083	135	128
Flour	Pound	.068	.067	155	152
Corn meal	do	.071	.071	209	209
Rice	do	.114	.116	125	127
Potatoes	do	.032	.031	119	115
Onions	do	.058	.050	118	102
Beans, navy	do	.189	.188	172	171
Prunes	do	.166	.164	124	122
Raisins, seeded	do	.148	.150	115	116
Sugar	do	.095	.094	119	118
Coffee	do	.302	.303	101	101
Tea	do	.617	.621	113	114
All articles combined				**136**	**138**

[1] 16 ounces, weight of dough.

In the year from December 15, 1916, to December 15, 1917, prices of food as a whole advanced 24 per cent. Potatoes and onions are the only articles that show a decline. Potatoes decreased in price 10 per cent and onions 12 per cent. The article showing the greatest increase is corn meal, which was 80 per cent higher in December, 1917, than in December, 1916. In this year, bacon increased 63 per cent; pork chops, 52 per cent; beans, 32 per cent; milk and ham, 31 per cent, each; lard, 28 per cent; rice, 27 per cent; hens, 26 per cent; flour, 23 per cent; eggs and bread, 20 per cent, each.

Food as a whole was 52 per cent higher on December 15, 1917, than on December 15, 1913, and 50 per cent higher than on either December 15, 1914, or December 15, 1915. During this four-year period, corn meal advanced 127 per cent; lard, 111 per cent; flour, 108 per cent; bacon, 83 per cent; sugar, 76 per cent; pork chops and potatoes, 67 per cent, each; ham, 64 per cent; milk, 44 per cent; butter, 37 per cent; and eggs, 33 per cent. No article declined in price.

A table showing the average and relative retail prices in December of each year from 1913 to 1917 follows:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON DEC. 15 OF EACH YEAR, 1913 TO 1917, INCLUSIVE.

[The relative price shows the per cent that the average price on December 15 of each year was of the average price for the year 1916.]

Article.	Unit.	Average money price Dec. 15—					Relative price Dec. 15—				
		1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
Sirloin steak	Pound	$0.251	$0.257	$0.251	$0.268	$0.320	92	94	92	98	117
Round steak	do	.225	.230	.225	.240	.300	92	94	92	98	122
Rib roast	do	.199	.199	.197	.210	.253	94	94	93	99	119
Chuck roast	do		.165	.160	.169	.215		96	93	98	125
Plate beef	do		.125	.119	.128	.164		98	93	100	128
Pork chops	do	.202	.195	.184	.222	.338	89	86	81	98	149
Bacon	do	.267	.278	.273	.298	.487	93	97	95	104	170
Ham	do	.265	.268	.270	.332	.435	90	91	92	113	148
Lard	do	.158	.154	.145	.259	.333	90	88	83	148	190
Hens	do	.208	.201	.203	.241	.304	88	85	86	102	129
Salmon, canned	do			.198	.212	.290			98	105	144
Eggs	Dozen	.476	.476	.465	.529	.634	127	127	124	141	169
Butter	Pound	.398	.394	.386	.449	.543	101	100	98	114	138
Cheese	do			.237	.310	.345			92	120	134
Milk	Quart	.091	.090	.089	.100	.131	100	99	98	110	144
Bread	16-oz. loaf[1]		.058	.062	.070	.083		89	95	107	128
Flour	Pound	.032	.037	.037	.055	.067	73	84	85	124	152
Corn meal	do	.031	.032	.032	.039	.071	92	95	95	116	209
Rice	do			.090	.091	.116			99	100	127
Potatoes	do	.019	.015	.019	.035	.031	69	54	69	128	115
Onions	do			.035	.057	.050			71	116	102
Beans, navy	do			.089	.143	.188			81	130	171
Prunes	do			.133	.138	.164			99	103	122
Raisins, seeded	do			.125	.139	.150			97	108	116
Sugar	do	.054	.060	.067	.083	.094	67	75	84	104	118
Coffee	do			.299	.299	.303			100	100	101
Tea	do			.546	.546	.621			100	100	114
All articles combined							**91**	**92**	**92**	**111**	**138**

[1] 16 ounces, weight of dough.

The two tables which follow give average retail prices for 29 articles in 45 cities.

For 16 cities, average prices are shown for December 15, 1913, December 15, 1916, and for November 15 and December 15, 1917. No

prices are given for meats in Atlanta, Ga., as less than 80 per cent of the butchers of that city sent in their reports for December, 1917, to the bureau.

For 29 cities, average prices are given for December 15, 1917. No prices are given for groceries in Charleston, S. C., since less than 80 per cent of the grocers of that city sent in their reports to the bureau.

It is manifestly unfair to attempt any comparison of prices between cities widely separated or between localities where qualities and market conditions vary greatly. For no article is it possible to quote prices on an identical grade throughout the 44 cities, as the grade varies not only from city to city but also from firm to firm within the same city and from month to month within the same store. Stores which vary in a marked degree the grade of articles handled from day to day or from month to month have not been included, but in every store there is necessarily some variation in grade. Methods of cutting beef differ considerably in different cities, and to some extent this affects retail prices. Emphasis should be placed upon the fact that, according to the method of cutting followed in Boston, Mass., Manchester, N. H., Philadelphia, Pa., and Providence, R. I., no cut corresponds to the cut known as sirloin in other cities. In these four cities the cut known as sirloin corresponds to the cut described above as porterhouse, and in this report the quotations of prices for the cities just named are for the cut known locally as sirloin. The cut commonly known as sirloin is sold in Fall River, Mass., under the name of "rump" steak, and in this report the prices quoted for that city are for the article known locally as "rump" steak. While the grade of beef quoted is not identical throughout the 44 cities, nor is the grade always identical in a store throughout the period for which prices are quoted. the article quoted is the best grade of meat on sale at the date of each quotation in the store selected, and the stores selected are those patronized largely by the families of American, English, Irish, German, and Scandinavian wage earners.

Below are given a few "remarks" taken from bakery reports of December 15. On many of the slips the note was made that the changes in weights and prices were due to the recent Government regulation.

Owing to the new formula now in use, our retail price has been reduced 1 cent per loaf this month.

Our change in weight complies with the rules of the Food Administration, the price to conform with ingredients.

Weights are changed to conform with Government regulation. Prices are the same per pound. Scaling weight is increased because of reduction of sugar

and shortening. Increased weight of dough, together with malt extract, have more than offset saving in sugar and shortening.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES FOR DEC. 15, 1913, 1916, AND 1917, AND NOV. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.				Boston, Mass.			
		Dec. 15, 1913.	Dec. 15, 1916.	1917 Nov. 15.	1917 Dec. 15.	Dec. 15, 1913.	Dec. 15, 1916.	1917 Nov. 15.	1917 Dec. 15.	Dec. 15, 1913.	Dec. 15, 1916.	1917 Nov. 15.	1917 Dec. 15.
Sirloin steak	Lb.	(1)	(1)	(1)	(1)	$0.223	$0.246	$0.311	$0.319	$0.330	$0.383	$0.418	$0.427
Round steak	Lb.	(1)	(1)	(1)	(1)	.208	.230	.304	.310	.343	.358	.421	.427
Rib roast	Lb.	(1)	(1)	(1)	(1)	.175	.212	.253	.262	.237	.268	.307	.309
Chuck roast	Lb.	(1)	(1)	(1)	(1)	.153	.164	.220	.227	.162	.208	.249	.253
Plate beef	Lb.	(1)	(1)	(1)	(1)	.....	.138	.175	.181	.....	.....	.....	.....
Pork chops	Lb.	(1)	(1)	(1)	(1)	.170	.204	.333	.336	.219	.238	.353	.349
Bacon, sliced	Lb.	(1)	(1)	(1)	(1)	.205	.247	.451	.458	.243	.270	.458	.453
Ham, sliced	Lb.	(1)	(1)	(1)	(1)	.275	.335	.468	.477	.307	.358	.443	.453
Lard	Lb.	(1)	(1)	(1)	(1)	.148	.205	.327	.330	.158	.224	.329	.341
Lamb	Lb.	(1)	(1)	(1)	(1)	.175	.233	.313	.324	.202	.244	.336	.335
Hens	Lb.	(1)	(1)	(1)	(1)	.207	.242	.296	.310	.240	.273	.326	.335
Salmon, canned	Lb.	.....	$0.174	$0.235	$0.235	.....	.175	.255	.254	.....	.198	.300	.302
Eggs, strictly fresh	Doz.	$0.433	.505	.501	.571	.404	.504	.580	.620	.575	.665	.737	.775
Eggs, storage	Doz.	.....	.407	.435	.438	.331	.390	.440	.446	.360	.398	.477	.480
Butter	Lb.	.404	.462	.551	.552	.402	.479	.539	.568	.379	.451	.517	.520
Cheese	Lb.	.....	.317	.347	.350	.....	.323	.358	.351	.....	.290	.326	.328
Milk	Qt.	.108	.125	.175	.177	.087	.092	.120	.128	.089	.096	.140	.140
Bread	16-oz.[2]	.....	.076	.090	.088	.....	.063	.082	.076	.....	.068	.081	.076
Flour	Lb.	.034	.053	.071	.071	.031	.054	.068	.066	.036	.059	.075	.075
Corn meal	Lb.	.026	.032	.054	.052	.025	.031	.064	.061	.036	.043	.076	.079
Rice	Lb.	.....	.079	.111	.112	.....	.098	.114	.116	.....	.098	.118	.120
Potatoes	Lb.	.023	.040	.040	.039	.018	.033	.030	.030	.017	.035	.035	.035
Onions	Lb.	.....	.061	.059	.059	.....	.058	.049	.054	.....	.062	.058	.058
Beans, navy	Lb.	.....	.135	.188	.188	.....	.145	.190	.187	.....	.139	.184	.189
Prunes	Lb.	.....	.133	.180	.177	.....	.128	.173	.175	.....	.146	.168	.172
Raisins	Lb.	.....	.149	.161	.167	.....	.138	.146	.151	.....	.140	.150	.151
Sugar	Lb.	.055	.090	.110	.104	.049	.078	.096	.095	.053	.081	.102	.101
Coffee	Lb.	.....	.281	.292	.288	.....	.235	.281	.286	.....	.345	.344	.344
Tea	Lb.	.....	.617	.784	.790	.....	.550	.649	.653	.....	.600	.648	.637

Article.	Unit.	Buffalo, N. Y.				Chicago, Ill.				Cleveland, Ohio.			
Sirloin steak	Lb.	$0.216	$0.245	$0.311	$0.310	$0.241	$0.262	$0.297	$0.292	$0.246	$0.250	$0.290	$0.297
Round steak	Lb.	.188	.225	.289	.290	.212	.221	.265	.260	.217	.222	.270	.278
Rib roast	Lb.	.164	.184	.243	.243	.197	.220	.245	.242	.186	.198	.228	.238
Chuck roast	Lb.	.150	.164	.220	.219	.157	.165	.206	.205	.170	.172	.206	.217
Plate beef	Lb.	.....	.133	.166	.171	.....	.131	.162	.159	.....	.121	.156	.163
Pork chops	Lb.	.176	.236	.349	.349	.179	.201	.312	.298	.194	.220	.331	.323
Bacon, sliced	Lb.	.206	.246	.460	.457	.320	.318	.497	.492	.279	.299	.467	.467
Ham, sliced	Lb.	.263	.327	.424	.432	.318	.344	.445	.429	.363	[3] .226	.441	.444
Lard	Lb.	.142	.200	.315	.328	.150	.207	.309	.319	.164	.226	.332	.330
Lamb	Lb.	.154	.204	.276	.280	.194	.221	.282	.286	.180	.138	.288	.290
Hens	Lb.	.198	.244	.297	.307	.177	.220	.258	.265	.193	.247	.294	.308
Salmon, canned	Lb.	.....	.182	.280	.283	.....	.233	.301	.295	.....	.188	.291	.279
Eggs, strictly fresh	Doz.	.476	.567	.595	.650	.400	.483	.496	.588	.480	.590	.605	.660
Eggs, storage	Doz.	.314	.380	.428	.426	.320	.381	.411	.438	.343	.438	.431	.443
Butter	Lb.	.391	.439	.506	.536	.383	.436	.492	.530	.422	.477	.530	.564
Cheese	Lb.	.....	.297	.334	.336	.....	.329	.371	.366	.....	.308	.348	.346
Milk	Qt.	.080	.100	.140	.138	.080	.090	.119	.119	.080	.090	.120	.120
Bread	16-oz.[2]	.....	.070	.087	.077	.....	.071	.090	.080	.....	.070	.089	.078
Flour	Lb.	.030	.051	.064	.061	.029	.051	.064	.061	.031	.057	.069	.068
Corn meal	Lb.	.026	.038	.074	.075	.029	.040	.069	.069	.029	.041	.076	.076
Rice	Lb.	.....	.093	.113	.115	.....	.094	.114	.115	.....	.093	.118	.124
Potatoes	Lb.	.017	.042	.032	.031	.017	.034	.027	.026	.020	.039	.033	.030
Onions	Lb.	.....	.046	.056	.054	.....	.053	.045	.044	.....	.059	.055	.051
Beans, navy	Lb.	.....	.138	.196	.193	.....	.147	.190	.189	.....	.135	.194	.194
Prunes	Lb.	.....	.136	.166	.167	.....	.142	.163	.160	.....	.134	.179	.176
Raisins	Lb.	.....	.122	.140	.141	.....	.147	.150	.148	.....	.139	.143	.146
Sugar	Lb.	.051	.079	.099	.097	.051	.073	.085	.084	.054	.085	.097	.094
Coffee	Lb.	.....	.285	.295	.295	.....	.300	.287	.283	.....	.288	.295	.291
Tea	Lb.	.....	.475	.539	.542	.....	.533	.588	.593	.....	.475	.556	.622

[1] Prices not shown; less than 80 per cent of reports from butchers for December, 1917, received by bureau.
[2] Loaf; 16 ounces, weight of dough.
[3] Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES FOR DEC. 15, 1913, 1916, AND 1917, AND NOV. 15, 1917—Continued.

Article.	Unit.	Denver, Colo.				Detroit, Mich.				Milwaukee, Wis.			
		Dec. 15, 1913.	Dec. 15, 1916.	1917		Dec. 15, 1913.	Dec. 15, 1916.	1917		Dec. 15, 1913.	Dec. 15, 1916.	1917	
				Nov. 15.	Dec. 15.			Nov. 15.	Dec. 15.			Nov. 15.	Dec. 15.
Sirloin steak	Lb	$0.229	$0.230	$0.282	$0.283	$0.248	$0.260	$0.294	$0.296	$0.234	$0.245	$0.280	$0.287
Round steak	Lb	.207	.190	.262	.262	.204	.224	.268	.268	.216	.214	.269	.275
Rib roast	Lb	.167	.184	.220	.223	.202	.218	.235	.237	.188	.191	.229	.233
Chuck roast	Lb	.150	.160	.197	.197	.154	.162	.193	.193	.164	.169	.205	.216
Plate beef	Lb	.....	.105	.138	.139	.....	.124	.154	.154	.....	.124	.152	.158
Pork chops	Lb	.200	.209	.346	.339	.182	.204	.326	.318	.174	.206	.310	.301
Bacon, sliced	Lb	.280	.325	.506	.536	.223	.253	.458	.456	.274	.297	.475	.488
Ham, sliced	Lb	.300	.338	.468	.467	.280	[1].220	.420	.430	.278	.306	.430	.441
Lard	Lb	.161	.223	.344	.345	.160	.207	.333	.336	.160	.218	.324	.331
Lamb	Lb	.156	.194	.298	.286	.160	.212	.286	.290	.185	.227	.298	.296
Hens	Lb	.199	.211	.278	.281	.186	.242	.293	.298	.172	.215	.238	.259
Salmon, canned	Lb	.....	.185	.269	.275	.....	.200	.293	.292	.....	.219	.278	.274
Eggs, strictly fresh	Doz	.471	.510	.528	.564	.453	.548	.582	.634	.400	.484	.483	.579
Eggs, storage	Doz	.360	.367	.444	.438	.335	.374	.411	.436	.330	.373	.414	.416
Butter	Lb	.379	.440	.485	.533	.389	.428	.505	.539	.388	.436	.498	.531
Cheese	Lb	.....	.320	.351	.359	.....	.300	.342	.339	.....	.317	.344	.338
Milk	Qt	.083	.083	.120	.120	.090	.100	.120	.140	.070	.080	.110	.110
Bread	16-oz.[2]	.....	.075	.089	.086	.....	.070	.082	.075	.....	.075	.088	.086
Flour	Lb	.026	.044	.057	.055	.031	.052	.066	.064	.030	.056	.064	.062
Corn meal	Lb	.025	.034	.061	.061	.028	.038	.083	.084	.032	.047	.077	.076
Rice	Lb	.....	.093	.116	.114	.....	.085	.118	.117	.....	.095	.115	.116
Potatoes	Lb	.016	.031	.029	.025	.016	.034	.027	.027	.017	.035	.028	.027
Onions	Lb	.....	.048	.049	.049	.....	.054	.055	.053	.....	.055	.048	.048
Beans, navy	Lb	.....	.115	.186	.184	.....	.144	.191	.185	.....	145	.195	.194
Prunes	Lb	.....	.135	.182	.170	.....	.120	.164	.160	.....	.150	.158	.159
Raisins	Lb	.....	.138	.143	.142	.....	.124	.136	.139	.....	.142	.147	.148
Sugar	Lb	.052	.085	.089	.088	.051	.081	.088	.086	.055	.081	.088	.087
Coffee	Lb	.....	.300	.300	.295	.....	.280	.299	.293	.....	.283	.270	.265
Tea	Lb	.....	.510	.577	.576	.....	.430	.576	.549	.....	.540	.586	.586
		New York, N. Y.				Philadelphia, Pa.				Pittsburgh, Pa.			
Sirloin steak	Lb	$0.257	$0.277	$0.326	$0.335	$0.300	$0.322	$0.374	$0.382	$0.270	$0.280	$0.345	$0.244
Round steak	Lb	.253	.269	.335	.342	.260	.278	.344	.370	.228	.243	.318	.318
Rib roast	Lb	.213	.228	.279	.285	.218	.232	.283	.288	.218	.223	.265	.265
Chuck roast	Lb	.158	.166	.218	.222	.178	.192	.237	.249	.167	.173	.231	.232
Plate beef	Lb	.....	.159	.209	.218	.....	.130	.169	.176	.....	.121	.168	.169
Pork chops	Lb	.184	.230	.339	.345	.206	.243	.356	.354	.208	.229	.250	.348
Bacon, sliced	Lb	.255	.268	.459	.461	.250	.299	.469	.466	.288	.317	.494	.502
Ham, sliced	Lb	[1].195	[1].230	[1].309	[1].325	.291	.357	.482	.486	.290	.352	.456	.461
Lard	Lb	.161	.218	.331	.337	.152	.217	.330	.338	.156	.213	.331	.341
Lamb	Lb	.154	.195	.265	.277	.188	.243	.311	.306	.207	.257	.342	.344
Hens	Lb	.207	.253	.295	.307	.226	.280	.322	.323	.248	.295	.338	.357
Salmon, canned	Lb	.....	.244	.340	.346	.....	.189	.263	.261	.....	.211	.299	.311
Eggs, strictly fresh	Doz	.543	.586	.647	.731	.483	.558	.593	.663	.492	.516	.553	.644
Eggs, storage	Doz	.367	.403	.446	.471	.347	.398	.434	.449	.351	.408	.453	.451
Butter	Lb	.411	.448	.516	.548	.466	.502	.567	.593	.420	.476	.528	.569
Cheese	Lb	.....	.292	.338	.346	.....	.314	.357	.370	.....	.321	.351	.349
Milk	Qt	.090	.099	.140	.140	.080	.088	.122	.122	.092	.103	.127	.127
Bread	16-oz.[2]	.....	.072	.088	.078	.....	.057	.078	.076	.....	.068	.090	.081
Flour	Lb	.032	.055	.077	.076	.031	.037	.072	.073	.032	.055	.070	.070
Corn meal	Lb	.034	.049	.083	.085	.028	.038	.072	.071	.030	.043	.087	.090
Rice	Lb	.....	.094	.119	.117	.....	.097	.123	.123	.....	.094	.112	.121
Potatoes	Lb	.024	.038	.036	.038	.023	.040	.038	.036	.019	.039	.033	.031
Onions	Lb	.....	.065	.060	.058	.....	.063	.054	.056	.....	.064	.053	.049
Beans, navy	Lb	.....	.151	.187	.186	.....	.141	.184	.187	.....	.149	.195	.200
Prunes	Lb	.....	.139	.169	.174	.....	.141	.167	.166	.....	.136	.172	.172
Raisins	Lb	.....	.134	.147	.151	.....	.131	.133	.135	.....	.143	.146	.148
Sugar	Lb	.049	.084	.100	.099	.050	.077	.096	.097	.055	.088	.105	.097
Coffee	Lb	.....	.262	.261	.275	.....	.285	.279	.279	.....	.271	.298	.297
Tea	Lb	.....	.445	.532	.515	.....	.536	.585	.571	.....	.575	.715	.720

[1] Whole.

[2] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 16 SELECTED CITIES FOR DEC. 15, 1913, 1916, AND 1917, AND NOV. 15, 1917—Concluded.

Article.	Unit.	St. Louis, Mo.				San Francisco, Cal.			
		Dec. 15, 1913.	Dec. 15, 1916.	1917		Dec. 15, 1913.	Dec. 15, 1916.	1917	
				Nov. 15.	Dec. 15.			Nov. 15.	Dec. 15.
Sirloin steak	Lb.	$0.266	$0.256	$0.296	$0.299	$0.210	$0.207	$0.240	$0.238
Round steak	Lb.	.236	.240	.289	.289	.200	.197	.236	.236
Rib roast	Lb.	.195	.203	.249	.252	.217	.208	.234	.227
Chuck roast	Lb.	.159	.164	.205	.204	.150	.146	.167	.168
Plate beef	Lb.	.....	.128	.167	.168	.....	.134	.162	.163
Pork chops	Lb.	.178	.194	.301	.291	.242	.243	.363	.362
Bacon, sliced	Lb.	.250	.270	.480	.477	.344	.367	.537	.532
Ham, sliced	Lb.	.273	.288	.456	.451	.340	.400	.488	.486
Lard	Lb.	.127	.190	.315	.296	.180	.223	.322	.334
Lamb	Lb.	.183	.229	.295	.294	.166	.217	.289	.281
Hens	Lb.	.173	.206	.348	.265	.245	.275	.334	.349
Salmon, canned	Lb.	.....	.187	.285	.287	.....	.179	.250	.252
Eggs, strictly fresh	Doz.	.408	.450	.471	.584	.533	.475	.638	.596
Eggs, storage	Doz.	.288	.400	.393	.428	.417	.375	.451	.441
Butter	Lb.	.396	.465	.522	.559	.386	.413	.501	.538
Cheese	Lb.	.....	.311	.353	.351	.....	.250	.324	.329
Milk	Qt.	.088	.097	.130	.130	.100	.100	.121	.121
Bread	16-oz.[1]	.....	.069	.092	.088	.....	.062	.083	.085
Flour	Lb.	.029	.044	.061	.061	.034	.051	.061	.062
Corn meal	Lb.	.026	.034	.064	.062	.035	.044	.074	.070
Rice	Lb.	.....	.086	.112	.111	.....	.084	.108	.112
Potatoes	Lb.	.017	.033	.031	.030	.019	.030	.031	.029
Onions	Lb.	.....	.054	.044	.045	.....	.046	.034	.030
Beans, navy	Lb.	.....	.144	.187	.183	.....	.138	.174	.163
Prunes	Lb.	.....	.138	.170	.166	.....	.124	.147	.139
Raisins	Lb.	.....	.160	.168	.167	.....	.127	.132	.137
Sugar	Lb.	.051	.075	.088	.086	.054	.078	.081	.081
Coffee	Lb.	.....	.242	.281	.280	.....	.317	.305	.301
Tea	Lb.	.....	.543	.626	.636	.....	.517	.539	.539
		Seattle, Wash.				Washington, D. C.			
Sirloin steak	Lb.	$0.236	$0.220	$0.267	$0.267	$0.265	$0.260	$0.360	$0.363
Round steak	Lb.	.206	.200	.253	.253	.226	.230	.332	.345
Rib roast	Lb.	.200	.186	.221	.220	.210	.213	.277	.285
Chuck roast	Lb.	.156	.140	.183	.183	.173	.180	.237	.249
Plate beef	Lb.	.....	.109	.154	.155	.....	.136	.184	.185
Pork chops	Lb.	.240	.226	.396	.383	.199	.230	.370	.370
Bacon, sliced	Lb.	.330	.320	.522	.524	.249	.278	.492	.496
Ham, sliced	Lb.	.300	.310	.434	.443	.210	.325	.432	.468
Lard	Lb.	.169	.211	.307	.320	.150	.210	.325	.335
Lamb	Lb.	.180	.200	.296	.301	.194	.245	.337	.351
Hens	Lb.	.246	.223	.283	.294	.220	.244	.311	.329
Salmon, canned	Lb.	.....	.196	.288	.288	.....	.175	.269	.285
Eggs, strictly fresh	Doz.	.542	.456	.666	.605	.421	.550	.645	.679
Eggs, storage	Doz.	.370	.370	.488	.484	.350	.398	.453	.462
Butter	Lb.	.438	.417	.542	.519	.423	.470	.534	.570
Cheese	Lb.	.....	.275	.308	.305	.....	.290	.354	.356
Milk	Qt.	.098	.098	.120	.125	.090	.100	.140	.140
Bread	16-oz.[1]	.....	.073	.092	.087	.....	.074	.090	.075
Flour	Lb.	.029	.045	.059	.058	.038	.056	.073	.072
Corn meal	Lb.	.033	.039	.074	.075	.026	.030	.067	.069
Rice	Lb.	.....	.084	.111	.108	.....	.091	.121	.123
Potatoes	Lb.	.015	.024	.022	.020	.018	.032	.033	.033
Onions	Lb.	.....	.047	.045	.042	.....	.054	.052	.048
Beans, navy	Lb.	.....	.139	.187	.183	.....	.138	.201	.199
Prunes	Lb.	.....	.133	.144	.145	.....	.150	.177	.175
Raisins	Lb.	.....	.131	.134	.145	.....	.123	.150	.149
Sugar	Lb.	.061	.084	.088	.088	.050	.081	.096	.097
Coffee	Lb.	.....	.326	.311	.310	.....	.293	.286	.285
Tea	Lb.	.....	.500	.554	.548	.....	.515	.630	.612

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON DEC. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Average retail prices, Dec. 15, 1917.									
		Birmingham, Ala.	Bridgeport, Conn.	Butte, Mont.	Charleston, S. C.	Cincinnati, Ohio.	Columbus, Ohio.	Dallas, Tex.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.
Sirloin steak	Lb.	$0.350	$0.404	$0.302	$0.279	$0.269	$0.317	$0.304	$0.428	$0.304	$0.327
Round steak	Lb.	.323	.372	.274	.260	.263	.291	.294	.367	.298	.302
Rib roast	Lb.	.250	.310	.248	.238	.236	.249	.250	.283	.225	.265
Chuck roast	Lb.	.211	.261	.206	.183	.190	.224	.220	.238	.208	.199
Plate beef	Lb.	.168	.167	.137	.143	.158	.177	.184	.....	.159	.154
Pork chops	Lb.	.361	.345	.352	.369	.314	.310	.350	.339	.332	.351
Bacon, sliced	Lb.	.539	.514	.580	.500	.461	.470	.516	.452	.488	.493
Ham, sliced	Lb.	.455	.492	.490	.444	.443	.449	.460	.436	.441	.428
Lard	Lb.	.332	.340	.335	.347	.313	.340	.316	.318	.327	.335
Lamb	Lb.	.325	.305	.312	.330	.278	.315	.320	.321	.283	.296
Hens	Lb.	.300	.325	.308	.331	.309	.294	.259	.346	.259	.329
Salmon, canned	Lb.	.288	.356	.350	(1)	.265	.261	.277	.277	.234	.294
Eggs, strictly fresh	Doz.	.590	.771	.700	(1)	.584	.598	.532	.765	.571	.617
Eggs, storage	Doz.	.471	.455	.521	(1)	.448	.444	.483	.488	.434	.473
Butter	Lb.	.575	.506	.550	(1)	.553	.547	.521	.497	.555	.554
Cheese	Lb.	.344	.344	.350	(1)	.356	.334	.358	.327	.376	.351
Milk	Qt.	.152	.140	.150	(1)	.130	.110	.155	.128	.107	.160
Bread	16-oz.[2]	.088	.082	.108	.090	.079	.089	.085	.088	.077	.084
Flour	Lb.	.070	.072	.079	(1)	.071	.066	.065	.075	.067	.074
Corn meal	Lb.	.050	.083	.083	(1)	.067	.061	.072	.087	.063	.059
Rice	Lb.	.127	.124	.128	(1)	.122	.118	.120	.119	.124	.106
Potatoes	Lb.	.033	.035	.025	(1)	.030	.029	.035	.033	.027	.039
Onions	Lb.	.059	.059	.051	(1)	.051	.054	.053	.052	.050	.057
Beans, navy	Lb.	.192	.188	.184	(1)	.186	.189	.181	.181	.203	.193
Prunes	Lb.	.153	.165	.168	(1)	.159	.159	.177	.166	.173	.177
Raisins	Lb.	.150	.157	.152	(1)	.155	.152	.149	.154	.172	.174
Sugar	Lb.	.109	.101	.101	(1)	.091	.091	.100	.103	.094	.101
Coffee	Lb.	.331	.319	.416	(1)	.266	.292	.348	.326	.295	.329
Tea	Lb.	.764	.600	.770	(1)	.733	.756	.810	.505	.753	.735

Article.	Unit.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Cal.	Louisville, Ky.	Manchester, N. H.	Memphis, Tenn.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.
Sirloin steak	Lb.	$0.311	$0.294	$0.266	$0.290	$0.430	$0.289	$0.238	$0.359	$0.403	$0.271
Round steak	Lb.	.283	.269	.240	.272	.398	.275	.228	.360	.368	.237
Rib roast	Lb.	.228	.244	.223	.229	.267	.253	.203	.292	.305	.237
Chuck roast	Lb.	.195	.197	.188	.201	.236	.200	.172	.255	.259	.180
Plate beef	Lb.	.155	.169	.158	.169	.....	.174	.137	.187	.....	.157
Pork chops	Lb.	.317	.338	.380	.322	.316	.342	.306	.351	.325	.364
Bacon, sliced	Lb.	.493	.524	.544	.509	.457	.490	.475	.449	.500	.514
Ham, sliced	Lb.	.450	.450	.529	.433	.417	.453	.444	[3] .342	.494	.424
Lard	Lb.	.346	.351	.330	.330	.342	.320	.327	.348	.337	.333
Lamb	Lb.	.257	.292	.295	.305	.325	.322	.233	.321	.331	.299
Hens	Lb.	.263	.280	.348	.320	.338	.288	.231	.326	.334	.303
Salmon, canned	Lb.	.291	.293	.317	.246	.301	.306	.318	.345	.329	.323
Eggs, strictly fresh	Doz.	.523	.533	.591	.554	.747	.585	.561	.752	.804	.530
Eggs, storage	Doz.	.451	.475	.456	.460	.458	.449	.394	.471	.460	.425
Butter	Lb.	.511	.550	.517	.560	.541	.531	.497	.579	.518	.550
Cheese	Lb.	.317	.371	.342	.357	.335	.329	.323	.355	.335	.348
Milk	Qt.	.126	.160	.120	.133	.120	.150	.110	.140	.128	.138
Bread	16-oz.[2]	.089	.094	.074	.091	.077	.087	.073	.071	.083	.074
Flour	Lb.	.062	.069	.063	.069	.072	.068	.058	.075	.070	.077
Corn meal	Lb.	.068	.061	.077	.058	.078	.052	.060	.083	.081	.070
Rice	Lb.	.111	.110	.117	.119	.108	.104	.103	.117	.116	.108
Potatoes	Lb.	.045	.035	.027	.035	.033	.028	.025	.037	.033	.056
Onions	Lb.	.054	.052	.034	.047	.053	.047	.042	.060	.056	.047
Beans, navy	Lb.	.183	.183	.167	.193	.190	.190	.194	.185	.188	.176
Prunes	Lb.	.145	.172	.150	.171	.155	.161	.144	.168	.176	.166
Raisins	Lb.	.154	.149	.148	.152	.156	.144	.143	.148	.155	.152
Sugar	Lb.	.097	.093	.085	.094	.100	.098	.090	.101	.106	.097
Coffee	Lb.	.286	.326	.303	.261	.342	.288	.310	.304	.335	.266
Tea	Lb.	.600	.789	.600	.726	.583	.717	.495	.555	.546	.621

[1] Prices not shown, less than 80 per cent of reports from grocers for December, 1917, received by bureau.
[2] Loaf; 16 ounces weight of dough.
[3] Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON DEC. 15, 1917—Concluded.

Article.	Unit.	Average retail prices, Dec. 15, 1917.			
		Omaha, Nebr.	Portland, Oreg.	Providence, R. I.	Richmond, Va.
Sirloin steak	Lb.	$0.300	$0.253	$0.519	$0.326
Round steak	Lb.	.282	.240	.414	.304
Rib roast	Lb.	.221	.230	.332	.256
Chuck roast	Lb.	.200	.181	.295	.228
Plate beef	Lb.	.150	.145	.....	.190
Pork chops	Lb.	.305	.311	.358	.359
Bacon, sliced	Lb.	.485	.523	.470	.484
Ham, sliced	Lb.	.444	.468	.511	[1] .367
Lard	Lb.	.343	.345	.345	.340
Lamb	Lb.	.292	.272	.346	.306
Hens	Lb.	.249	.268	.352	.296
Salmon, canned	Lb.	.281	.346	.290	.238
Eggs, strictly fresh	Doz.	.563	.614	.723	.550
Eggs, storage	Doz.	.435	.491	.445	.468
Butter	Lb.	.516	.555	.538	.575
Cheese	Lb.	.349	.310	.336	.355
Milk	Qt.	.123	.127	.130	.140
Bread	16-oz. [2]	.087	.078	.083	.087
Flour	Lb.	.060	.057	.070	.071
Corn meal	Lb.	.066	.072	.076	.061
Rice	Lb.	.108	.113	.116	.116
Potatoes	Lb.	.029	.022	.033	.037
Onions	Lb.	.046	.043	.050	.060
Beans, navy	Lb.	.177	.158	.185	.207
Prunes	Lb.	.168	.132	.173	.151
Raisins	Lb.	.156	.137	.145	.149
Sugar	Lb.	.092	.089	.101	.100
Coffee	Lb.	.312	.310	.339	.282
Tea	Lb.	.596	.565	.573	.691

Article.	Unit.	Average retail prices, Dec. 15, 1917.				
		Rochester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Springfield, Ill.
Sirloin steak	Lb.	$0.302	$0.273	$0.272	$0.334	$0.308
Round steak	Lb.	.288	.239	.254	.299	.303
Rib roast	Lb.	.249	.227	.235	.270	.237
Chuck roast	Lb.	.235	.188	.197	.224	.219
Plate beef	Lb.	.177	.138	.155	.166	.181
Pork chops	Lb.	.346	.304	.358	.350	.330
Bacon, sliced	Lb.	.447	.481	.507	.473	.494
Ham, sliced	Lb.	.426	.438	.436	.440	.444
Lard	Lb.	.343	.321	.358	.335	.340
Lamb	Lb.	.291	.245	.290	.326	.320
Hens	Lb.	.332	.233	.306	.345	.230
Salmon, canned	Lb.	.293	.294	.295	.293	.280
Eggs, strictly fresh	Doz.	.738	.499	.618	.700	.558
Eggs, storage	Doz.	.427	.405	.490	.440	.442
Butter	Lb.	.527	.504	.542	.516	.570
Cheese	Lb.	.341	.332	.339	.329	.381
Milk	Qt.	.125	.100	.104	.130	.125
Bread	16-oz. [2]	.074	.084	.099	.085	.093
Flour	Lb.	.067	.060	.054	.072	.066
Corn meal	Lb.	.081	.066	.074	.....	.071
Rice	Lb.	.123	.116	.105	.119	.125
Potatoes	Lb.	.027	.025	.020	.030	.028
Onions	Lb.	.049	.040	.045	.060	.048
Beans, navy	Lb.	.202	.197	.190	.189	.203
Prunes	Lb.	.176	.167	.152	.164	.172
Raisins	Lb.	.148	.145	.143	.147	.173
Sugar	Lb.	.101	.092	.093	.101	.090
Coffee	Lb.	.295	.319	.350	.315	.295
Tea	Lb.	.505	.531	.634	.581	.686

[1] Whole. [2] Loaf; 16 ounces weight of dough.

RELATIVE PRICES, 1907 TO DECEMBER, 1917.

To afford an opportunity to compare average yearly retail prices of food back over a period of years, index numbers, computed from data collected by the United States Bureau of Labor Statistics, are given in the table following. In this table the average price for 1913 is taken as the basis, or 100. These index numbers are simply percentages in which comparison is made with the average price in 1913. Interpreted in dollars, the food that cost $1 in 1913 cost $1.46 in 1917, while the same food cost but $0.82 in 1907, $0.84 in 1908, etc.

The increase in the retail price of food in 1917 over 1916 was 29 per cent. Comparing 1917 with 1907, there is an advance in the index number from 82 to 146, an increase of 64 points, which number, 64, is 78 per cent of 82, making the increase 78 per cent.

Prices for chuck roast, plate boiling beef, and bread were secured first in 1914; and those for cheese, rice, beans, coffee, tea, salmon, onions, prunes, and raisins in 1915. Relative numbers for these articles, therefore, can not be computed on the 1913 base.

Beginning with 1914, chuck roast, plate boiling beef, and bread, and beginning with 1915, cheese, rice, coffee, and tea, have been included in the index numbers for all articles combined, weighted according to amount of consumption. As the bureau has no figures of the family consumption of beans, salmon, onions, prunes, and raisins, these articles have never been included in the weighted index tables.

The effect of the war on food prices can be followed in this table from year to year and from month to month.

RELATIVE RETAIL PRICES, PER CENT OF INCREASE OR DECREASE OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907, TO DECEMBER, 1917, BY ARTICLES.

[Average price for 1913=100.]

Year and month.	Relative prices.															All articles combined.		
	Sirloin steak.	Round steak.	Rib roast.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	Butter.	Milk.	Flour.	Corn meal.	Potatoes.	Sugar.	Relative price.	Per cent of increase or decrease in each year or month as compared with— 1913.	Each year or month preceding.
1907	71	68	76	74	74	76	81	81	84	85	87	95	88	105	105	82	−18	.....
1908	73	71	78	76	77	78	80	83	86	86	90	102	92	111	108	84	−16	+ 2
1909	77	74	81	83	83	82	90	89	93	90	91	109	94	112	107	89	−11	+ 6
1910	80	78	85	92	95	91	104	94	98	94	95	108	95	101	109	93	− 7	+ 4
1911	81	79	85	85	91	89	88	91	93	88	96	102	94	130	111	92	− 8	− 1
1912	91	89	94	91	91	91	94	93	99	98	97	115	102	132	115	98	− 2	+ 7
1913	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	.....	+ 2
1914	102	106	103	105	102	102	99	102	102	94	100	104	105	108	108	102	+ 2	+ 2
1915	101	103	101	96	100	97	93	97	99	93	99	126	108	89	120	101	+ 1	− 1
1916	108	110	107	108	106	109	111	111	109	103	102	135	113	155	146	114	+14	+13
1917	124	130	126	152	152	142	175	134	139	127	125	211	192	253	169	146	+ 46	+28
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	.....	.....
January	94	92	95	89	94	93	97	95	108	107	100	100	99	91	106	98	− 2	− 1
February	94	93	95	90	95	94	98	97	91	108	100	100	98	90	100	97	− 3	− 1
March	97	96	98	97	97	97	99	100	77	108	100	100	98	88	99	97	− 3	± 0
April	101	99	101	103	99	99	100	104	73	106	100	100	98	87	98	98	− 2	+ 1
May	101	100	101	100	100	99	100	104	76	94	99	101	98	91	97	97	− 3	− 1
June	102	101	102	99	101	102	100	103	81	92	99	101	98	104	97	98	− 2	+ 1
July	104	104	102	103	104	104	101	102	87	91	99	101	98	110	100	100	± 0	+ 2
August	104	104	102	104	105	106	102	101	96	92	99	100	100	109	102	101	+ 1	+ 1
September	103	104	101	108	104	104	102	101	109	98	100	100	102	110	104	102	+ 2	+ 1
October	101	104	101	107	103	102	101	100	121	100	101	99	103	106	101	104	+ 4	+ 2
November	100	102	100	102	101	100	101	97	144	101	102	99	104	107	99	105	+ 5	+ 1
December	99	101	100	97	99	99	100	98	138	104	102	99	104	106	98	104	+ 4	− 1
1914: Av. for year	**102**	**106**	**103**	**105**	**102**	**102**	**99**	**102**	**102**	**94**	**100**	**104**	**105**	**108**	**108**	**102**	+ 2	.....
January	99	102	100	99	98	98	100	100	126	104	102	98	104	108	95	104	+ 4	± 0
February	99	102	101	100	98	99	99	104	106	93	102	99	103	108	94	101	+ 1	− 3
March	100	103	101	100	99	99	99	105	90	92	101	99	103	107	93	99	− 1	− 2
April	100	103	102	103	99	99	99	108	74	86	100	99	103	105	91	97	− 3	− 2

May	102	105	102	103	99	99	98	106	77	85	100	99	103	112	94	98	− 2	+ 1
June	103	106	103	103	100	100	97	103	82	88	100	99	103	132	93	99	− 1	+ 1
July	106	109	105	106	101	103	97	103	87	89	100	98	103	155	95	102	+ 2	+ 3
August	110	113	108	119	107	108	99	104	96	94	100	106	105	111	143	107	+ 7	+ 5
September	107	110	105	113	108	108	99	103	107	98	100	113	109	105	145	107	+ 7	± 0
October	103	107	104	110	106	105	98	100	113	98	101	111	109	89	132	105	+ 5	− 2
November	100	105	103	104	104	102	99	97	131	103	101	112	109	83	113	105	+ 5	± 0
December	101	103	101	93	103	100	97	94	139	103	101	113	107	84	110	105	+ 5	± 0
1915: Av. for year	**101**	**103**	**101**	**96**	**100**	**97**	**93**	**97**	**99**	**93**	**99**	**126**	**108**	**89**	**120**	**101**	**+ 1**	.....
January	100	102	101	88	101	98	97	95	129	101	101	124	109	85	110	103	+ 3	−2
February	98	100	100	85	99	96	97	97	98	98	100	138	110	84	118	101	+ 1	−2
March	97	99	99	85	98	95	96	99	74	94	99	136	110	82	120	98	− 2	−3
April	99	100	100	94	98	94	96	100	75	94	99	137	109	86	122	99	− 1	+1
May	101	103	101	99	98	95	96	101	76	91	99	139	109	89	124	100	± 0	+1
June	103	105	103	98	99	97	95	98	78	90	98	130	109	99	126	100	± 0	±0
July	105	107	104	100	100	98	93	97	81	90	98	125	108	85	127	100	± 0	±0
August	104	107	104	103	100	98	89	97	88	88	99	124	108	82	123	100	± 0	±0
September	104	106	103	107	100	97	88	97	101	88	99	117	108	79	118	101	+ 1	+1
October	103	104	102	110	101	99	91	97	117	92	100	113	108	94	111	103	+ 3	+2
November	101	102	101	99	101	100	92	95	133	95	100	113	107	97	119	104	+ 4	+1
December	99	101	100	87	101	100	92	95	135	101	100	114	107	106	124	105	+ 5	+1
1916: Av. for year	**108**	**110**	**107**	**108**	**106**	**109**	**111**	**111**	**109**	**103**	**102**	**135**	**113**	**155**	**146**	**114**	**+14**	.....
January	101	102	101	89	101	109	111	101	123	100	100	120	107	136	123	107	+ 7	+2
February	101	102	102	92	101	110	112	104	101	99	100	125	108	141	125	106	+ 6	−1
March	104	104	104	104	103	113	115	107	82	105	100	120	107	140	137	107	+ 7	+1
April	106	108	106	107	104	116	119	111	79	108	99	119	108	138	145	109	+ 9	+2
May	109	112	110	109	105	118	127	113	82	97	99	119	108	140	156	109	+ 9	±0
June	113	117	113	110	107	119	130	114	87	95	99	117	108	167	158	112	+12	+3
July	113	116	112	111	107	120	132	113	93	93	100	116	108	134	160	111	+11	−1
August	112	115	111	116	108	121	133	112	105	95	101	134	110	141	155	113	+13	+2
September	111	115	110	125	110	123	141	113	120	102	102	148	113	161	141	118	+18	+4
October	108	111	108	118	110	123	147	114	132	109	105	155	117	165	149	121	+21	+3
November	106	108	106	111	111	123	162	112	149	114	109	174	126	198	157	126	+26	+4
December	106	107	106	106	110	123	164	112	154	118	112	167	131	198	151	126	+26	±0
1917: Av. for year	**124**	**130**	**126**	**152**	**152**	**142**	**175**	**134**	**139**	**127**	**125**	**211**	**192**	**253**	**169**	**146**	**+46**	.....
January	109	111	109	113	110	114	136	119	158	118	112	171	132	225	116	128	+28	+2
February	113	117	114	125	114	118	138	126	147	122	112	171	136	290	148	133	+33	+4
March	116	119	118	133	123	125	151	129	101	121	112	174	137	297	160	133	+33	±0
April	125	130	127	146	141	136	167	136	112	133	114	206	154	339	175	145	+45	+9
May	127	133	130	146	155	144	176	138	116	122	117	266	178	352	183	151	+51	+4
June	129	135	132	148	158	145	177	136	119	123	119	246	182	366	170	152	+52	+1
July	129	137	130	151	159	147	174	131	122	120	125	220	195	246	166	146	+46	−4
August	130	138	129	164	160	147	176	131	134	124	128	229	219	206	181	149	+49	+2
September	131	133	131	185	164	152	188	142	152	129	132	223	272	172	179	153	+53	+3
October	130	138	130	185	178	159	198	146	160	133	143	214	232	178	177	157	+57	+3
November	124	133	127	165	179	159	207	138	168	138	144	208	235	183	174	155	+55	−1
December	126	134	128	161	181	161	211	143	184	142	147	205	235	178	172	157	+57	+1

WHOLESALE PRICES IN THE UNITED STATES.

PRICE CHANGES FOR IMPORTANT COMMODITIES SINCE JULY, 1914.

Figures compiled by the Bureau of Labor Statistics show the wholesale prices of food and other commodities for a date just prior to the outbreak of the European war, and subsequent dates indicating the movement of prices as affected by the war. During the latter half of 1917 many of these commodities had more than doubled and others were three times as much as in July, 1914. Among the articles showing the largest increases were hogs; bacon; lard; sheep; mutton; butter; eggs; wheat flour; corn; corn meal; cotton, woolen, and leather goods; coke; coal (bituminous); pig iron; steel billets; tinplate; lead; crude petroleum; and gasoline. Many of these commodities, however, declined in price during the closing months of the year, due largely to Government regulation.

A comparison of wholesale prices of important commodities in representative markets since July, 1914, is contained in the two tables which follow. The average money prices for the specified month are shown in the first table. The relative prices in the second table are based on the actual prices, the prices for July, 1914, being taken as 100.

WHOLESALE PRICES, JULY, 1915 AND 1916, AND JANUARY TO DECEMBER, 1917, COMPARED WITH JULY, 1914.

Actual Money Prices.

Article.	Unit.	July.			1917							
		1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
FOODSTUFFS.												
(a) Animal.		$	$	$	$	$	$	$	$	$	$	$
Cattle, good to choice steers.	100 lbs.	9.219	9.213	9.985	10.530	12.310	12.560	13.175	14.988	14.675	14.388	13.235
Beef, fresh, good native steers.	Lb.	.135	.132	.141	.138	.160	.164	.171	.190	.190	.190	.185
Beef, salt, extra mess	Bbl.	17.250	17.500	18.250	23.250	26.250	30.500	29.500	29.500	30.700	31.500	31.500
Hogs, heavy	100 lbs.	8.769	7.281	9.825	10.955	15.795	15.460	17.331	18.325	17.590	17.456	16.850
Bacon, short clear sides	Lb.	.141	.111	.157	.165	.218	.248	.263	.280	.321	.319	.314
Hams, smoked, loose	Lb.	.177	.161	.190	.195	.240	.240	.241	.268	.286	.290	.302
Lard, prime, contract	Lb.	.102	.081	.131	.161	.213	.201	.227	.242	.247	.279	.254
Pork, salt, mess	Bbl.	23.625	18.500	27.167	32.250	39.000	42.250	44.438	46.938	48.300	49.000	52.750
Sheep, ewes	100 lbs.	4.538	5.469	6.545	9.260	11.715	8.600	8.906	10.063	10.525	10.188	10.325
Mutton, dressed	Lb.	.095	.109	.131	.137	.165	.145	.157	.180	.191	.178	.188
Butter, creamery, extra	Lb.	.270	.261	.276	.380	.428	.376	.400	.425	.431	.442	.481
Eggs, fresh, firsts	Doz.	.187	.169	.223	.411	.319	.318	.339	.374	.372	.432	.484
Milk	Qt.	.030	.030	.031	.051	.049	.050	.060	.060	.072	.077	.072
(b) Vegetable.												
Wheat, No. 1 northern	Bu.	0.897	1.390	1.170	1.917	2.381	2.582	2.788	2.221	2.170	2.170	2.170
Wheat flour, standard patent.	Bbl.	4.594	7.031	6.100	9.215	11.619	12.750	13.069	11.263	10.500	10.225	10.131
Corn, No. 2, mixed	Bu.	.710	.783	.808	.982	1.397	2.044	1.921	2.071	1.968	2.056	1.709
Corn meal, fine yellow	100 lbs.	1.425	1.725	1.900	2.650	3.100	4.000	5.175	4.950	4.900	4.900	4.750
Oats, standard, in store	Bu.	.369	.529	.405	.557	.652	.764	.596	.588	.591	.661	.756
Rye, No. 2	Bu.	.618	1.036	.966	1.448	1.854	2.226	1.818	1.854	1.811	1.785	1.822
Rye flour, pure, medium straight.	Bbl.	2.975	5.388	5.150	7.380	9.400	11.620	9.738	9.294	9.625	9.625	9.663
Barley, fair to good malting.	Bu.	.533	.743	.746	1.180	1.335	1.391	1.303	1.323	1.306	1.281	1.473
Rice, Honduras, head	Lb.	.054	.049	.046	.048	.049	.071	.072	.070	.077	.078	.079
Potatoes, white	Bu.	1.206	.444	.863	1.795	2.669	2.375	1.458	1.094	1.188	1.136	1.088
Sugar, granulated	Lb.	.042	.058	.075	.066	.082	.075	.082	.082	.082	.082	.080

WHOLESALE PRICES, JULY, 1915 AND 1916, AND JANUARY TO DECEMBER, 1917, COMPARED WITH JULY, 1914—Continued.

Actual Money Prices—Concluded.

Article.	Unit.	July.			1917							
		1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
TEXTILES AND LEATHER GOODS.												
		$	$	$	$	$	$	$	$	$	$	$
Cotton, upland, middling.	Lb.	.131	.092	.130	.176	.203	.261	.259	.227	.281	.299	.306
Cotton yarn, carded, 10/1.	Lb.	.215	.160	.253	.340	.360	.450	.440	.420	.420	.470	.495
Sheeting, brown, Pepperell.	Yd.	.070	.060	.078	.110	.120	.140	.140	.140	.145	.155	.165
Bleached muslin, Lonsdale.	Yd.	.085	.075	.088	.110	.113	.160	.160	.170	.170	.170	.180
Wool, fine fleece, scoured.	Lb.	.575	.652	.761	1.000	1.152	1.478	1.630	1.690	1.652	1.652	1.696
Worsted yarn, 2-32's	Lb.	.650	.850	1.100	1.250	1.300	1.600	1.650	1.700	1.800	1.900	2.000
Clay worsted suitings, 16-oz.	Yd.	1.328	1.508	2.000	2.125	2.675	3.250	3.650	3.650	3.650	3.800	4.025
Storm serge, all-wool, 50-in.	Yd.	.505	.539	.760	.907	.907	1.176	1.250	1.250	1.250	1.250	1.250
Hides, packers', heavy native steers.	Lb.	.194	.258	.270	.335	.305	.330	.320	.330	.338	.353	.350
Leather, chrome calf	Sq. ft.	.275	.280	.460	.705	.595	.540	.540	.505	.540	.560	.560
Leather, sole, oak	Lb.	.475	.495	.635	.835	.835	.815	.830	.830	.830	.840	.840
Shoes, men's, Goodyear welt, vici calf, blucher.	Pair	3.150	3.250	3.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750	4.750
Shoes, women's Goodyear welt, gun metal, button.	Pair	2.260	2.350	2.750	3.500	3.500	3.500	3.500	3.500	3.500	3.500	3.500
MINERAL AND METAL PRODUCTS.												
Coal, anthracite, chestnut.	2,240 lbs	5.241	5.200	5.507	5.739	5.236	5.933	6.011	6.218	6.232	6.242	6.585
Coal, bituminous, run of mine.	2,000 lbs	2.200	2.200	2.200	4.500	5.000	5.000	4.400	3.300	3.300	3.750	3.750
Coke, furnace, prompt shipment.	2,000 lbs	2.000	1.750	2.750	9.500	7.500	15.000	10.000	11.750	6.000	6.000	6.000
Copper, electrolytic	Lb.	.134	.199	.265	.295	.340	.318	.290	.253	.235	.235	2.350
Copper wire, bare, No. 8.	Lb.	.148	.210	.325	.368	.368	.338	.318	.298	.298	.288	.278
Pig iron, Bessemer	Ton[1]	14.900	14.950	21.950	35.950	42.200	57.450	54.750	48.025	37.250	37.250	37.250
Steel billets	Ton[1]	19.000	21.380	41.000	63.000	73.750	100.000	86.000	66.250	49.375	47.500	47.500
Tin plate, domestic coke.	100 lbs.	3.350	3.175	5.875	7.000	8.000	12.000	12.000	12.000	.....	7.750	7.750
Pig tin	Lb.	.311	.391	.389	.430	.543	.620	.639	.610	.605	.660	.800
Pig lead	Lb.	.039	.058	.069	.075	.094	.114	.109	.104	.080	.061	.065
Spelter	Lb.	.051	.220	.113	.098	.108	.093	.088	.083	.084	.080	.080
Petroleum, crude	Bbl.	1.750	1.350	2.600	2.850	3.050	3.100	3.100	3.500	3.500	3.500	3.500
Petroleum, refined, water-white.	Gal.	.120	.120	.120	.120	.120	.120	.120	.130	.130	.130	.140
Gasoline, motor	Gal.	.140	.120	.240	.220	.240	.240	.240	.240	.240	.240	2.400

[1] 2,240 pounds.

WHOLESALE PRICES, JULY, 1915 AND 1916, AND JANUARY TO DECEMBER, 1917, COMPARED WITH JULY, 1914—Concluded.

Relative Prices.

Article.	July.			1917							
	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
FOODSTUFFS.											
(a) Animal.											
	$	$	$	$	$	$	$	$	$	$	$
Cattle, good to choice steers	100.0	99.9	108.3	114.2	133.5	136.2	142.9	162.6	159.2	156.1	143.6
Beef, fresh, good native steers	100.0	97.4	104.7	101.9	118.5	121.5	126.7	140.7	140.7	140.7	137.0
Beef, salt, extra mess	100.0	101.4	105.8	134.8	152.2	176.8	171.0	171.0	178.0	182.6	182.6
Hogs, heavy	100.0	83.0	112.0	124.9	180.1	176.3	197.6	209.0	200.6	199.1	192.2
Bacon, short clear sides	100.0	78.8	111.3	117.3	154.8	175.9	186.5	198.6	227.7	226.2	223.4
Hams, smoked, loose	100.0	91.0	107.3	110.2	138.4	135.6	136.2	151.4	161.6	163.8	170.6
Lard, prime, contract	100.0	79.1	128.3	157.1	208.3	197.1	222.5	237.3	242.2	273.5	249.0
Pork, salt, mess	100.0	78.3	115.0	136.5	165.1	178.8	188.1	198.7	204.4	207.4	223.3
Sheep, ewes	100.0	120.5	144.2	204.1	258.2	189.5	196.3	221.7	231.9	224.5	227.5
Mutton, dressed	100.0	114.7	137.9	144.2	173.7	152.6	165.3	189.5	201.1	187.4	197.9
Butter, creamery, extra	100.0	96.7	102.2	140.7	158.5	139.3	148.1	157.4	159.6	163.7	178.1
Eggs, fresh, firsts	100.0	90.4	119.3	219.8	170.6	170.1	181.3	200.0	198.9	231.0	257.8
Milk	100.0	100.0	103.3	170.0	163.3	166.7	200.0	200.0	240.0	256.7	240.0
(b) Vegetable.											
Wheat, No. 1 northern	100.0	155.0	130.5	213.6	265.5	287.8	310.8	247.6	241.9	241.9	241.9
Wheat flour, standard patent	100.0	153.1	132.8	200.6	252.9	277.5	284.5	245.2	228.6	222.6	220.5
Corn, No. 2 mixed	100.0	110.2	113.7	138.2	196.7	287.9	270.6	291.7	277.2	289.6	240.7
Corn meal, fine yellow	100.0	121.1	133.3	186.0	217.5	280.7	363.2	347.4	343.9	343.9	333.3
Oats, standard, in store	100.0	143.4	109.8	150.9	176.7	207.0	161.5	159.3	160.2	179.1	204.9
Rye, No. 2	100.0	167.6	156.3	234.3	300.0	360.2	294.2	300.0	293.1	272.7	294.8
Rye flour, pure, medium straight	100.0	181.1	173.1	248.1	316.0	390.6	327.3	312.4	323.5	323.5	324.9
Barley, fair to good malting	100.0	139.4	140.0	221.4	250.5	261.0	244.5	248.2	245.0	240.3	276.4
Rice, Honduras, head	100.0	90.7	85.2	88.9	90.7	131.5	133.3	129.6	142.6	144.4	146.3
Potatoes, white	100.0	36.8	71.5	148.8	221.2	196.9	121.1	90.7	98.5	94.2	90.2
Sugar, granulated	100.0	138.6	178.6	157.6	194.0	178.6	195.2	195.2	195.2	195.2	190.5
TEXTILES AND LEATHER GOODS.											
Cotton, upland, middling	100.0	70.1	99.3	134.3	154.8	199.2	197.7	173.3	214.5	228.2	233.6
Cotton yarn, carded, 10/1	100.0	74.4	117.4	158.1	167.4	209.3	204.7	195.3	195.3	218.6	230.2
Sheeting, brown, Pepperell	100.0	85.7	111.4	157.1	171.4	200.0	200.0	200.0	207.1	221.4	235.7
Bleached muslin, Lonsdale	100.0	88.2	103.5	129.4	132.9	188.2	188.2	200.0	200.0	200.0	211.8
Wool, fine fleece, scoured	100.0	113.5	132.4	174.1	200.6	257.0	283.5	293.9	287.8	287.3	295.0
Worsted yarn, 2-32's	100.0	130.8	169.2	192.3	200.0	246.2	253.8	261.5	276.9	292.3	307.7
Clay worsted suitings, 16-ounce	100.0	113.6	150.6	169.0	201.4	244.7	274.8	274.8	274.8	280.1	302.9
Storm serge, all-wool, 50-inch	100.0	106.7	150.5	179.6	179.6	232.9	247.5	247.5	247.5	247.5	247.5
Hides, packers', heavy native steers	100.0	133.0	139.2	172.7	157.2	170.1	164.9	170.1	174.2	182.0	180.4
Leather, chrome calf	100.0	101.8	167.3	258.4	216.4	196.4	196.4	183.6	196.4	203.6	203.6
Leather, sole, oak	100.0	104.2	133.7	175.8	175.8	171.6	174.7	174.7	174.7	176.8	176.8
Shoes, men's, Goodyear welt, vici-calf, blucher	100.0	103.2	119.0	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8
Shoes, women's, Goodyear welt, gun metal, button	100.0	104.0	121.7	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9
MINERAL PRODUCTS.											
Coal, anthracite, chestnut	100.0	99.2	105.1	109.5	99.9	113.2	114.7	118.6	118.9	119.1	125.6
Coal, bituminous, run of mine	100.0	100.0	100.0	204.5	227.3	227.3	200.0	150.0	150.0	170.5	170.5
Coke, furnace, prompt shipment	100.0	87.5	137.5	475.0	375.0	750.0	500.0	500.0	300.0	300.0	300.0
Copper, electrolytic	100.0	148.4	197.8	220.1	253.7	237.3	216.4	188.8	175.4	175.4	175.4
Copper wire, bare, No. 8	100.0	111.9	219.6	248.6	248.6	228.4	214.9	201.4	201.4	194.6	187.8
Pig iron, Bessemer	100.0	100.3	147.3	241.3	283.2	385.6	367.4	322.3	250.0	250.0	250.0
Steel billets	100.0	112.5	215.8	331.6	388.2	526.3	452.6	348.7	259.9	250.0	250.0
Tin plate, domestic, coke	100.0	94.8	175.4	209.0	238.8	358.2	358.2	358.2	.....	231.3	231.3
Pig tin	100.0	125.7	125.0	138.3	174.4	199.4	205.5	196.1	194.2	212.2	257.2
Pig lead	100.0	147.4	175.6	192.3	239.7	292.3	279.5	266.6	205.1	156.4	166.6
Spelter	100.0	435.6	222.8	193.1	212.9	182.4	172.5	162.7	164.7	156.9	156.9
Petroleum, crude	100.0	77.1	148.6	162.9	174.3	177.1	177.1	200.0	200.0	200.0	200.0
Petroleum, refined, water-white	100.0	100.0	100.0	100.0	100.0	100.0	100.0	108.3	108.3	108.3	116.6
Gasoline, motor	100.0	85.7	171.4	157.1	171.4	171.4	171.4	171.4	171.4	171.4	171.4

INDEX NUMBERS, BY GROUPS OF COMMODITIES, 1913 TO 1917.

The great increase that has taken place in the wholesale prices of important commodities in the United States since 1913, the year preceding the outbreak of war in Europe, is shown by information collected by the Bureau of Labor Statistics of the United States Department of Labor. This increase has been particularly great among farm products, foods, clothing, metal products, and drugs and chemicals. During 1914 the prices of most commodities increased between January and September, but declined rapidly in the closing months of the year, due to the prevailing business stagnation brought about by the war. Among articles classed as fuel and lighting, metals and metal products, and lumber and building materials prices declined throughout the year.

In 1915 a reaction occurred and prices again advanced, reaching high levels late in the year. Since January, 1916, the rise in wholesale prices has been unprecedented. The bureau's weighted index number, based on 292 separate articles or price series, stood at 181 in December, 1917, as compared with 110 in January, 1916, and 100 as the average for the 12 months of 1913. In the same period, January, 1916, to December, 1917, the index number of farm products increased from 108 to 204, that of food articles from 114 to 185, and that of cloths and clothing from 110 to 206. These facts are clearly brought out in the table which follows:

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES AND BY YEARS AND MONTHS, 1913 TO 1917.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	All commodities.
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	97	99	100	99	107	100	101	100	100	99
February	97	98	101	102	105	101	100	100	100	100
March	98	97	101	102	102	101	100	100	99	99
April	97	96	100	99	102	101	100	100	99	98
May	98	95	100	99	102	101	100	100	99	98
June	100	99	99	100	100	101	99	100	100	100
July	101	101	100	100	98	101	99	100	102	101
August	101	104	100	100	99	99	99	100	101	101
September	104	105	100	100	99	99	100	100	101	102
October	103	102	100	100	99	98	100	100	100	101
November	101	105	100	99	96	98	101	100	100	101
December	100	101	99	96	92	98	101	100	99	99
1914: Av. for year	**103**	**103**	**98**	**92**	**87**	**97**	**103**	**103**	**97**	**99**
January	101	102	99	99	92	98	101	103	98	100
February	102	100	99	99	92	99	101	103	98	99
March	102	97	100	99	92	99	101	103	99	99
April	103	95	100	98	91	99	101	103	99	98
May	104	96	100	93	87	98	101	103	99	98
June	104	100	100	90	86	98	101	103	98	98
July	104	103	100	90	85	97	101	103	97	99
August	109	112	100	89	85	97	100	103	97	102
September	108	116	99	87	86	96	106	103	98	103
October	103	107	98	87	83	96	109	103	95	99
November	101	106	97	87	81	95	108	103	95	98
December	99	105	97	87	83	94	107	103	96	97
1915: Av. for year	**105**	**104**	**100**	**87**	**97**	**94**	**113**	**101**	**98**	**100**
January	102	106	96	86	83	94	106	101	98	98
February	105	108	97	86	87	95	104	101	97	100
March	105	104	97	86	89	94	103	101	97	99
April	107	105	98	84	91	94	102	101	97	99
May	109	105	98	83	96	94	102	101	96	100
June	105	102	98	83	100	93	104	101	96	99
July	108	104	99	84	102	94	107	101	96	101
August	108	103	99	85	100	93	109	101	96	100
September	103	100	100	88	100	93	114	101	96	98
October	105	104	103	90	100	93	121	101	99	101
November	102	108	105	93	104	95	141	101	100	102
December	103	111	107	96	114	97	146	101	103	105
1916: Av. for year	**122**	**126**	**127**	**115**	**148**	**101**	**143**	**110**	**120**	**123**
January	108	114	110	102	126	99	140	105	107	110
February	109	114	114	102	132	100	144	105	106	111
March	111	115	117	104	141	101	147	105	109	114
April	114	117	119	105	147	102	150	109	111	116
May	116	119	122	104	151	102	153	109	114	118
June	116	119	123	105	149	101	150	109	121	118
July	118	121	126	105	145	98	143	111	122	119
August	126	128	128	107	145	100	132	111	123	123
September	131	134	131	110	148	100	132	111	126	127
October	136	140	137	128	151	101	135	114	132	133
November	145	150	146	150	160	103	142	115	135	143
December	141	146	155	163	185	105	143	115	136	146
1917: Av. for year	**188**	**177**	**181**	**169**	**208**	**124**	**185**	**155**	**153**	**175**
January	147	150	161	170	183	106	144	128	137	150
February	150	160	162	178	190	108	146	129	138	155
March	162	161	163	181	199	111	151	129	140	160
April	180	182	169	178	208	114	155	151	144	171
May	196	191	173	187	217	117	164	151	147	181
June	196	187	179	193	239	127	165	162	152	184
July	198	180	187	183	257	132	185	165	150	185
August	204	180	193	159	249	133	198	165	155	184
September	203	178	193	155	228	134	203	165	154	182
October	207	183	194	143	182	134	242	165	162	180
November	211	184	202	151	173	135	232	175	164	182
December	204	185	206	153	173	135	230	175	164	181

COMPARISON OF PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

Figures compiled by the Bureau of Labor Statistics furnish a comparison of wholesale and retail price changes among a number of important food articles since 1913. In collecting data for the comparison it was found that in some instances slight differences of grade or quality existed between the articles for which wholesale prices were obtainable and those for which retail prices could be secured. It was found impracticable, also, in most instances to obtain both kinds of quotations for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in showing price variations in the retail as compared with the wholesale markets.

In the following table the wholesale price is in each case the mean of the high and the low quotations on the date selected as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question. The initials W. and R. are used to designate wholesale and retail prices, respectively.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917.					
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.	Dec.
Beef:											
Steer loin ends (hips), Chic..W.	Lb..	$0.168	$0.175	$0.160	$0.205	$0.200	$0.200	$0.190	$0.235	$0.235	$0.325
Sirloin steak, Chicago.....R.	Lb..	.232	.260	.258	.281	.265	.293	.302	.306	.297	.392
Beef:											
Steer rounds, No. 2, Chic....W.	Lb..	.131	.145	.143	.145	.120	.155	.170	.190	.180	.170
Round steak, Chicago.....R.	Lb..	.202	.233	.228	.241	.227	.256	.266	.273	.265	.260
Beef:											
Steer ribs, No. 2, Chicago....W.	Lb..	.157	.165	.145	.175	.160	.210	.200	.230	.190	.200
Rib roast, Chicago.....R.	Lb..	.195	.212	.213	.229	.223	.241	.246	.247	.245	.242
Beef:											
No. 2 loins, New York.....W.	Lb..	.158	.183	.170	.200	.180	.190	.190	.275	.220	.220
Sirloin steak, New York.....R.	Lb..	.259	.274	.282	.294	.284	.318	.337	.356	.326	.335
Beef:											
No. 2 rounds, New York....W.	Lb..	.121	.135	.135	.145	.130	.170	.175	.190	.183	.180
Round steak, New York.....R.	Lb..	.249	.270	.271	.289	.275	.315	.337	.360	.335	.342
Beef:											
No. 2 ribs, New York.....W.	Lb..	.151	.165	.160	.180	.160	.200	.190	.275	.225	.225
Rib roast, New York.....R.	Lb..	.218	.225	.227	.243	.238	.270	.279	.298	.279	.285
Pork:											
Loins, Chicago.....W.	Lb..	.149	.165	.150	.165	.165	.240	.250	.330	.250	.245
Chops, Chicago.....R.	Lb..	.190	.204	.201	.217	.227	.285	.292	.358	.312	.298
Pork:											
Loins, Western, New York..W.	Lb..	.152	.163	.153	.165	.170	.235	.235	.300	.260	.270
Chops, New York.....R.	Lb..	.217	.230	.217	.239	.248	.319	.326	.399	.339	.345
Bacon:											
Short clear sides, Chicago....W.	Lb..	.127	.139	.113	.159	.158	.218	.247	.318	.316	.321
Sliced, Chicago.....R.	Lb..	.294	.318	.315	.328	.316	.395	.439	.475	.497	.492

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917					
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.	Dec.
Ham:											
Smoked, Chicago.....W.	Lb..	$0.166	$0.175	$0.163	$0.190	$0.188	$0.243	$0.243	$0.283	$0.283	$0.303
Smoked, sliced, Chicago.....R.	Lb..	.266	.338	.328	.349	.333	.382	.414	.439	.445	.429
Lard:											
Prime contract, New York..W.	Lb..	.110	.104	.080	.133	.159	.215	.201	.246	.280	.261
Pure, tub, New York.....R.	Lb..	.160	.156	.151	.168	.213	.263	.274	.313	.331	.337
Lamb:											
Dressed, round, Chicago.....W.	Lb..	.149	.170	.190	.190	.200	.220	.260	.270	.230	.240
Leg of, yearling, Chicago.....R.	Lb..	.198	.219	.208	.231	.232	.263	.287	.314	.282	.286
Poultry:											
Dressed fowls, New York...W.	Lb..	.182	.188	.175	.215	.220	.265	.248	.285	.235	.250
Dressed hens, New York.....R.	Lb..	.214	.220	.219	.256	.261	.293	.287	.323	.295	.307
Butter:											
Creamery, extra, Chicago....W.	Lb..	.310	.265	.265	.275	.370	.440	.375	.435	.438	.475
Creamery, extra, Chicago....R.	Lb..	.362	.312	.322	.335	.438	.484	.432	.487	.492	.530
Butter:											
Creamery, extra, New York.W.	Lb..	.323	.280	.270	.285	.395	.459	.395	.443	.445	.493
Creamery, extra, New York .R.	Lb..	.382	.328	.336	.346	.460	.513	.453	.515	.516	.548
Butter:											
Creamery, extra, San Fran..W.	Lb..	.317	.245	.265	.255	.355	.390	.385	.460	.435	.450
Creamery, extra, San Fran..R.	Lb..	.388	.329	.338	.333	.425	.452	.455	.545	.501	.538
Cheese:											
Whole milk, Chicago.....W.	Lb..	.142	.133	.145	.145	.218	.223	.216	.246	.228	.221
Full cream, Chicago.....R.	Lb..	.....	.....	.229	.242	.321	.327	.339	.368	.374	.366
Cheese:											
Whole milk, State, N. Y.....W.	Lb..	.154	.144	.146	.151	.220	.245	.238	.255	.225	.228
Full cream, American, N. Y..R.	Lb..	.....	.....	.229	.228	.301	.335	.328	.340	.338	.346
Cheese:											
Fancy, San Francisco.....W.	Lb..	.159	.125	.115	.135	.180	.215	.200	.220	.230	.230
Full cream, San Francisco...R.	Lb..	.....	.....	.200	.229	.242	.297	.297	.316	.324	.329
Milk:											
Fresh, Chicago.....W.	Qt..	.038	.036	.037	.036	.045	.054	.047	.074	.070	.070
Fresh, bottled, Chicago.....R.	Qt..	.080	.080	.080	.081	.100	.100	.100	.129	.119	.119
Milk:											
Fresh, New York.....W.	Qt..	.035	.030	.030	.031	.051	.049	.050	.072	.077	.072
Fresh, bottled, New York...R.	Qt..	.090	.090	.090	.090	.100	.109	.114	.138	.140	.140
Milk:											
Fresh, San Francisco.....W.	Qt..	.039	.039	.038	.038	.038	.038	.043	.059	.059	.059
Fresh, bottled, San Fran.....R.	Qt..	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121
Eggs:											
Fresh, firsts, Chicago.....W.	Doz.	.226	.188	.168	.218	.485	.305	.310	.370	.415	.485
Strictly fresh, Chicago.....R.	Doz.	.292	.261	.248	.296	.525	.376	.406	.409	.496	.558
Eggs:											
Fresh, firsts, New York.....W.	Doz.	.249	.215	.200	.241	.505	.330	.350	.400	.470	.555
Strictly fresh, New York....R.	Doz.	.397	.333	.326	.372	.667	.424	.477	.627	.647	.731
Eggs:											
Fresh, San Francisco.....W.	Doz.	.268	.230	.220	.240	.380	.230	.320	.435	.520	.450
Strictly fresh, San Francisco..R.	Doz.	.373	.338	.310	.333	.480	.374	.392	.608	.658	.596
Flour:											
Winter patent, Kansas City.W.	Bbl.	4.012	3.550	6.225	4.750	8.950	11.450	11.150	10.500	10.500	10.000
Aristos, Kansas City.....R.	Bbl.	5.923	5.733	7.800	6.700	10.600	13.689	13.680	13.000	12.760	12.150
Flour:											
Standard patent, Minn.....W.	Bbl.	4.581	4.500	7.025	6.050	9.450	11.025	12.000	10.550	10.200	10.150
Pillsbury's Best, Minn.....R.	Bbl.	5.600	5.800	8.200	7.000	10.800	13.200	13.424	11.984	11.456	11.300
Flour:											
Fancy patent, St. Louis.....W.	Bbl.	4.181	3.700	5.800	4.925	8.675	11.375	11.375	11.250	11.100	10.525
Gold Medal, St. Louis.....R.	Bbl.	6.077	6.000	8.187	6.933	10.587	12.853	13.200	13.100	12.267	12.300
Meal, corn:											
Fine, yellow, New York.....W.	Lb..	.014	.014	.017	.019	.027	.031	.040	.049	.049	.048
Fine, yellow, New York.....R.	Lb..	.034	.034	.035	.042	.051	.057	.070	.082	.083	.085
Beans:											
Medium, choice, N.Y.....W.	Lb..	.040	.040	.058	.098	.108	.130	.154	.138	.149	.141
Navy, white, New York.....R.	Lb..	.....	.....	.081	.113	.149	.162	.188	.185	.187	.186
Potatoes:											
White, good to choice, Chic..W.	Bu..	.614	1.450	.400	.975	1.750	2.800	2.625	1.135	1.950	1.080
White, Chicago.....R.	Bu..	.900	1.640	.700	1.856	2.370	3.455	2.975	1.660	1.623	1.562
Rice:											
Head, New Orleans.....W.	Lb..	.050	.054	.049	.046	.048	.049	.071	.077	.078	.079
Head, New Orleans.....R.	Lb..	.....	.....	.075	.074	.074	.088	.101	.100	.101	.103
Sugar:											
Granulated, New York.....W.	Lb..	.043	.042	.059	.075	.066	.081	.074	.082	.082	.080
Granulated, New York.....R.	Lb..	.049	.046	.063	.079	.074	.087	.094	.097	.100	.099

Relative wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table which follows. A few articles included in the preceding table are omitted from this one, owing to lack of satisfactory data for 1913. It will be seen from the table that since the beginning of the present year the retail prices of most of the commodities included in the exhibit have fluctuated at a relatively lower level, as compared with their 1913 base, than have the wholesale prices. This is particularly noticeable in the case of bacon, lard, dressed lamb, butter, milk, eggs, flour, corn meal, and potatoes. Comparing December prices with the average for 1913, it is seen that only 2 articles of the 28 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are dressed poultry and granulated sugar at New York. In most of the other months of 1917 the retail prices of these articles were relatively lower than were the wholesale prices.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917					
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.	Dec.
Beef:										
Steer loin ends (hips), Chicago..W..	100	104	95	122	119	119	113	140	140	140
Sirloin steak, Chicago.....R..	100	112	111	121	114	126	130	132	128	126
Beef:										
Steer rounds, No. 2, Chicago....W..	100	111	109	111	92	118	130	145	137	130
Round steak, Chicago.....R..	100	115	113	119	112	127	132	135	131	129
Beef:										
Steer ribs, No. 2, Chicago.....W..	100	105	92	111	102	134	127	146	121	127
Rib roast, Chicago.....R..	100	109	109	117	114	124	126	127	126	124
Beef:										
No. 2 loins, city, New York.....W..	100	116	108	127	114	120	120	174	139	139
Sirloin steak, New York.....R..	100	106	109	114	110	123	130	137	126	129
Beef:										
No. 2 rounds, city, New York...W..	100	112	112	120	107	140	145	157	151	149
Round steak, New York.....R..	100	108	109	116	110	127	135	145	135	137
Beef:										
No. 2 ribs, city, New York.....W..	100	109	106	119	106	132	126	182	149	149
Rib roast, New York.....R..	100	103	104	111	109	124	128	137	128	131
Pork:										
Loins, Chicago.....W..	100	111	101	111	111	161	168	221	168	164
Chops, Chicago.....R..	100	107	106	114	119	150	154	188	164	157
Pork:										
Loins, western, New York.....W..	100	107	101	109	112	155	155	197	171	178
Chops, New York.....R..	100	106	100	110	114	147	150	184	156	159
Bacon:										
Short, clear sides, Chicago.....W..	100	109	89	125	124	172	194	250	249	253
Sliced, Chicago.....R..	100	108	107	112	107	134	149	162	169	167
Hams:										
Smoked, Chicago.....W..	100	105	98	114	113	146	146	170	170	183
Smoked, sliced, Chicago.....R..	100	127	123	131	125	144	156	165	167	161
Lard:										
Prime, contract, New York.....W..	100	95	73	121	145	195	183	224	225	237
Pure, tub, New York.....R..	100	98	94	105	133	164	171	196	207	211
Lamb:										
Dressed, round, Chicago.....W..	100	114	128	128	134	148	174	181	154	161
Leg of, yearling, Chicago.....R..	100	111	105	117	117	133	145	159	142	144
Poultry:										
Dressed fowls, New York.....W..	100	103	96	118	121	146	136	157	129	137
Dressed hens, New York.....R..	100	103	102	120	122	137	134	151	138	143
Butter:										
Creamery, extra, Chicago.....W..	100	85	85	89	119	142	121	140	141	153
Creamery, extra, Chicago.....R..	100	86	89	93	121	134	119	135	136	146

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100)—Concluded.

Article and city.	1913: Average for year.	July.			1917					
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Nov.	Dec.
Butter:										
Creamery, extra, New York.....W..	100	87	84	88	122	139	122	137	138	153
Creamery, extra, New York.....R..	100	86	88	91	120	134	119	135	135	143
Butter:										
Creamery, extra, San Francisco.W..	100	77	84	80	112	123	121	145	137	142
Creamery, extra, San Francisco .R..	100	85	87	86	110	116	117	140	129	139
Milk:										
Fresh, Chicago.....W..	100	95	97	95	118	142	124	195	184	184
Fresh, bottled, delivered, Chicago.R..	100	100	100	101	125	125	125	151	149	149
Milk:										
Fresh, New York.....W..	100	86	86	89	146	140	143	206	220	206
Fresh, bottled, delivered, N. Y..R..	100	100	100	100	111	121	127	153	156	156
Milk:										
Fresh, San Francisco.....W..	100	100	97	97	97	97	110	151	151	151
Fresh, bottled, San Francisco...R..	100	100	100	100	100	100	100	121	121	121
Eggs:										
Fresh, firsts, Chicago.....W..	100	83	74	96	215	135	137	164	184	215
Strictly fresh, Chicago.....R..	100	89	85	101	180	129	139	161	170	201
Eggs:										
Fresh, firsts, New York.....W..	100	86	80	97	203	133	141	191	189	223
Strictly fresh, New York.....R..	100	89	82	94	168	167	129	158	163	184
Eggs:										
Fresh, San Francisco.....W..	100	86	82	90	142	105	119	162	194	168
Strictly fresh, San Francisco....R..	100	91	83	89	129	130	105	163	171	160
Flour:										
Winter patent, Kansas City....W..	100	89	155	118	223	235	278	262	262	249
Aristos, Kansas City.....R..	100	97	132	113	179	231	231	221	215	205
Flour:										
Standard patent, Minneapolis..W..	100	98	153	132	206	241	262	230	223	221
Pillsbury's Best, Minneapolis...R..	100	104	146	125	193	236	240	214	205	202
Flour:										
Fancy patent, St. Louis.....W..	100	88	139	118	207	272	272	269	265	252
Gold Medal, St. Louis.....R..	100	99	135	114	174	212	217	216	202	202
Meal, corn:										
Fine, yellow, New York.....W..	100	100	121	136	193	221	286	350	350	343
Fine, yellow, New York.....R..	100	100	103	124	150	168	206	211	244	250
Potatoes:										
White, good to choice, Chicago..W..	100	236	65	159	235	456	428	185	191	176
White, Chicago.....R..	100	182	78	151	233	384	331	184	180	174
Sugar:										
Granulated, New York.....W..	100	98	137	174	153	188	172	191	191	186
Granulated, New York.....R..	100	94	129	161	151	178	171	198	204	202

CHANGES IN COST OF ARMY AND NAVY RATION.

As an index of the rise in prices in the United States fluctuations in the annual and per diem cost of the Army and Navy ration may be of interest. A brief tabular statement showing the changes of the actual annual and per diem cost per man for subsistence in the United States Army and Navy has been compiled from the annual report of the Quartermaster General of the Army and of the Paymaster General of the Navy, and the result is presented in the following table:

CHANGES IN COST OF THE ARMY AND NAVY RATION, 1911 TO 1917.

Year.	Cost of Army ration.		Cost of Navy ration.		Relative: 1917=100.	
	Annual.	Daily.	Annual.	Daily.	Army.	Navy.
		Cents.		*Cents.*		
1911	.....	.....	$134.72	36.91	.....	84.2
1912	.....	.....	133.55	36.59	.....	83.4
1913	$108.75	29.79	137.28	37.61	89.6	85.8
1914	111.03	30.42	135.45	37.11	91.5	84.7
1915	100.28	27.50	133.41	36.55	82.7	83.4
1916	102.17	27.99	137.42	37.65	84.2	85.9
1917	121.36	33.25	159.91	43.81	100.0	100.0

COURSE OF RETAIL PRICES OF FOOD IN THE UNITED KINGDOM, 1914 TO 1917.

The following table, taken from the Labor Gazette of the British Ministry of Labor for December, 1917, shows by months the percentage of increase in retail prices of food in the United Kingdom since July, 1914. The figures are a correct measure of the general level of prices, on the assumption that the prewar quantities of the various articles were bought throughout the period covered, but as it is well known that the articles were not always obtainable in the same quantity it is quite clear that the figures should not be used as a measure of the rise in the actual expenditure on food.

AVERAGE PERCENTAGE INCREASE SINCE JULY, 1914, IN RETAIL PRICES OF FOOD.

Month (beginning of).	1914	1915	1916	1917
January		18	45	87
February		22	47	89
March		24	48	92
April		24	49	94
May		26	55	98
June		32	59	102
July		32½	61	104
August	[1] 15	34	60	102
September	10	35	65	106
October	12	40	68	97
November	13	41	78	106
December	16	44	84	105

[1] This percentage relates to prices on Aug. 8, 1914. On that date they were not so high as three or four days earlier.

The average percentage of increase on December 1, 1917, as compared with July, 1914, for certain specified articles of food in the descending order of the magnitude of the increase is shown in the following statement:

	Per cent.		Per cent.
Fish	191	Eggs (see text)	95
Sugar (granulated)	188	Cheese	92
Meat, imported	[1] 115 to 161	Meat, British	[1] 75 to 100
Bacon	134	Margarine	65
Tea	107	Bread	54
Butter	99	Flour	52
Milk	96	Potatoes	39

For eggs the percentage shown relates to July, 1917, and not to December, 1917, as the seasonal change in prices of eggs is so great that the December percentage would be valueless for comparative purposes. With regard to meat it may be remarked that the diversity in percentages arises from the disparity in the prices of different cuts, and that the actual amount of average increase shows much less variation, the range 6½d. to 8¼d. (13 to 17 cents) per pound covering six of the eight cuts included in the figures.

[1] According to description.

The figures showing the percentage of increase between July 14, 1914, and December 1, 1917, in the retail prices of a number of groceries of less importance in working-class dietaries are given in the following statement:

	Per cent.		Per cent.
Lentils, split (red)	230	Milk, condensed	120
Peas, split (yellow)	210	Beans, butter	110
Sago	190	Jam	110
Tapioca	160	Rice, Rangoon	100
Sirup	160	Cocoa (loose)	95
Beans, haricot	140	Coffee	30
Oatmeal, Scotch	140		

The average rise with these secondary items is clearly greater than with the principal foodstuffs.

CAUSES FOR INCREASE OF PRICES OF CERTAIN COMMODITIES IN GREAT BRITAIN.

In 1916 a departmental committee of the British Board of Trade was appointed to determine the causes for the increase of prices of certain commodities since the beginning of the war. On September 22, 1916, this committee submitted an interim report on meat, milk, and bacon prices, a summary of which appeared in the MONTHLY REVIEW for January, 1917 (pp. 51 to 56). On November 15 and December 31, following, the second and third (final) interim reports, respectively, were filed with the president of the Board of Trade, the two reports constituting a single pamphlet of 22 pages.[1] As a part of the second report, which takes up the prices of bread, flour, and wheat, the committee has made a statement concerning the closely connected problems of the shortage of shipping and the increase in freight charges. The third interim report deals with potato, tea, and sugar prices.

Before the war the average price of a 4-pound loaf of bread, according to the report, was slightly over 5¾d. (11.7 cents). A material advance, beginning in December, 1914, and continuing until the following June, raised the average price to 8½d. (17.2 cents) per four pounds. A gradual fall in price then occurred, succeeded by another advance during the winter of 1915–16, when the average price was nearly 9d. (18.3 cents), and by a still further advance in November, 1916, when the average price was just over 9½d. (19.3

[1] Great Britain. Departmental committee on prices. Committee appointed by the Board of Trade to investigate the principal causes which have led to the increase of prices of commodities since the beginning of the war. Second and third interim reports. Bread, flour, and wheat prices; freight charges; and potato, tea, and sugar prices. London, 1917. 22 pp. Price 3d., net.

cents), or an increase of approximately 65.2 per cent over the prewar price.

A rise in the price of flour is given as the principal cause for this increase in the price of bread. A table in the report shows that at Liverpool, in the period January to July, 1914, the price of bakers' grade flour had advanced from 25s. 8d. ($6.25) per sack of 280 pounds to 53s. ($12.90) in October, 1916, an increase of 106.4 per cent. By the beginning of November, 1916, it is stated, the average retail price of household flour in the United Kingdom, which had been about 10½d. (21.3 cents) per 7 pounds before the war, had risen to 1s. 6d. (36.5 cents), an increase of 71.4 per cent. The increase in the wholesale price, in turn affecting the retail price, is declared to have been due to the great advance in the cost of wheat to the millers. The same table noted above shows an increase in the prices of wheat ranging from 32s. 3d. ($7.85) for British wheat before the war to 60s. 7d. ($14.74) in October, 1916, an increase of 87.8 per cent; and from 35s. 7d. ($8.66) for Canadian wheat at London before the war to 77s. ($18.74) for the same wheat at London in October, 1916, an increase of 116.4 per cent.

This advance in wheat prices the report attributes to several factors, among which are inaccessibility of the supplies of Russia and the Balkan States, heavy consumption by the armies, the necessity of accumulating emergency stocks in the countries of the entente, combined with the requirements of several neutral countries, and the decrease in tonnage available to transport wheat resulting in a rise in ocean freight charges.

The committee found in its investigation of the matter of freight rates as related to the increase in the prices of wheat and flour, and indirectly bread, a wide difference in tariffs in the period January to March, 1914, as compared with the period July to September, 1916. To illustrate, a table is given showing that the ocean freight rate on grain from New York was 1s. 2d. (28.4 cents) per quarter (28 pounds) in the first period and 9s. 8d. ($2.35) in the second period, an increase of 729 per cent; and that the rate on grain from Argentina (down river) was 9s. 10d. ($2.39) per ton during the first period and 140s. 6d. ($34.19) during the second period, an increase of 1,329 per cent. The chief reasons ascribed by the committee for this condition are shortage in the amount of shipping available for mercantile purposes due principally to its diversion to naval and military uses, the increased cost of working the ships, the withdrawal of the German mercantile marine, and the shortage of labor and congestion at the docks. The committee at this point gives a brief review of the measures taken by the Government to control British shipping, thus effecting a reduction in freight rates, many of the rates being

considerably below the market quotations. The advisability of further governmental control is suggested. The second interim report of the committee concludes with the following recommendations:

1. Since the sharp rise in the price of home-grown supplies of wheat will, in our opinion, continue unless there is prompt Government action, we recommend that the Government should immediately fix such a maximum price to the producer for marketable home-grown wheat as will protect the public, while securing to the farmer a reasonable profit.

2. That simultaneously with this measure, fair contract prices, at which the farmers of the United Kingdom should be asked to grow wheat and oats for the Government in the cereal year 1916–17, should be fixed and published.

3. That maximum prices, corresponding with the cost of wheat, both home-grown and imported, as determined by the Government, should be immediately fixed and announced for home-milled flour and offals in the cereal year 1916–17.

4. That the Government should add control of the import of maize to its control of the import of wheat.

5. That the Government of India should at once take steps to induce native cultivators to place as large an area as possible under cultivation for wheat to be harvested in the cereal year 1916–17, and that, if necessary, the home Government should guarantee a contract price.

6. That the Government of the United Kingdom should consider the desirability of discussing with the Government of Egypt the suitability for Egypt of a policy similar to that recommended for India, including a guarantee by the Government of the United Kingdom.

7. That the British mercantile marine should be further controlled by the Government to the end that foods and the raw materials of essential industries shall have precedence of other goods, and be carried at fair and reasonable rates.

8. The congestion of shipping in British ports, referred to in our previous report, has not, we fear, been wholly remedied. A more serious congestion, further, appears to have arisen in certain allied ports. We therefore urge anew that much waste of tonnage occurs through such congestion, and that it is the pressing duty of our own and the allied Governments specially concerned to remedy the evil.

THIRD INTERIM REPORT.

The third interim report of the departmental committee on prices, submitted on December 30, 1916, is confined to a consideration of increases in the prices of potatoes, tea, and sugar. As to potatoes, it seems that no serious increase occurred after the outbreak of the war until April, 1916, when the average price was 151s. 6d. ($36.86) per ton, as compared with 87s. 6d. ($21.29) in June, 1914, an increase of 73 per cent. This price rose to 245s. ($59.61) in June, 1916, an increase of 180 per cent over the June, 1914, price. This rise in price, the committee states, was due to reductions in the quantity brought to market, the feeding of potatoes to live stock, bad weather when the crop was ready for digging, military drain on farm labor, a falling off in the acreage planted, an increase in the cost of production, and, possibly, a certain amount of speculation, combined with undue withholding of supplies from market by large growers and dealers.

The retail price of tea was found to have increased, since the war began, approximately 50 per cent, inclusive of import duty, the average price just preceding the report of the committee being rather more than 9d. (18.3 cents) per pound in excess of the price in July, 1914. Of this increase, 7d. (14.2 cents) is accounted for by increased taxation. The chief causes given for this advance in price are said to be difficulties in maintaining supplies, owing to scarcity of shipping, the risk of ocean transport, and also a strong competitive demand arising from heavy Army requirements and the desire of traders to maintain adequate stocks to provide for the needs of their customers. The evidence also seemed to indicate heavy speculative buying.

The rise in the price of sugar (exclusive of duty) since the beginning of the war has been proportionately greater than that of any of the other main articles of food, declares the report, the average price of white granulated sugar having increased by 170 per cent in the United Kingdom generally. At the beginning of the war the price was approximately 2d. (4.1 cents) per pound; in December, 1916, at the time of this report, it was about 5½d. (11.2 cents). A sudden rise immediately after the beginning of the war is accounted for by excited buying on the part of the public, combined with the stoppage of imports from Germany and Austria-Hungary, and with interruptions to shipments from other quarters. The situation was relieved by the Government, which purchased large supplies and appointed a royal commission to take them over and generally to control the further importation and the distribution. But the relief was only temporary; decreased supplies caused a further advance in price. Further factors, noted by the report, in the rise of prices, especially during 1916, were an increase in the charges for docking and handling in the ports and in the working expenses, including wages, cost of conveyance, packages, petrol, horse keeping, repairs, etc., at the refineries and in the different stages of distribution. The report says:

The refiners' profits are limited, their selling prices being prescribed by the royal commission on a basis regulated in accordance with the price at which the raw sugar imported is issued to them. In addition, any profit made in excess of the prewar figures plus an agreed percentage is recovered by the royal commission. The profits of the wholesale distributors are also limited to 1¾ per cent of the price, including duty * * *. The Commission itself aims at adding only such a fraction to the cost as will meet insurance and working expenses, and provide a sufficient reserve fund to enable uniformity of price to be maintained and to provide a balance in hand to meet any possible reduction in prices at the close of the war.

Wholesale prices being thus regulated by the royal commission, the prices charged by retailers are also watched. Owing to the variations in the cost of transport from the ports to different towns, and in the terms upon which dif-

ferent traders purchase their supplies, no attempt is made to prescribe a uniform retail price for the country as a whole; but action is taken to deal with any efforts which may be made by individual traders to exact grossly excessive prices. For standard granulated sugar, the present wholesale price to the first-hand buyers, including duty, is 41s. 7½d. [$10.13] per hundredweight (less 1¾ per cent) which, after allowing for a fair profit to the distributors, will in most cases permit the retailer to sell at 5d. [10.1 cents] per pound at the port. When the sugar has to travel to a place in the country ordinarily well served by transport facilities, it is considered that 5¼d. [10.7 cents] will usually give a fair rate of profit to the retailer.

The shortage during 1916, and consequent rise in prices, was, however, due primarily, it was found, to the scarcity of available shipping which made it necessary in the national interests to reduce the amount of tonnage placed at the disposal of the sugar commission and by the increase in the army requirements of sugar.

Summarizing, the following table indicates the changes in prices of commodities noted in this article:

RISE IN PRICES OF CERTAIN COMMODITIES IN GREAT BRITAIN DUE TO THE WAR.

Commodity.	Unit.	Average price July, 1914.	Average price June, 1915.	Average price October, 1916.	Per cent of increase, 1916 over 1914.
Bread	4-pound loaf	$0.117	$0.172	$0.203	73.5
Flour [1]	280-pound sack	6.53	11.19	13.85	112.1
Wheat, imported [2]	480 pounds	8.78	14.07	18.74	113.4
Wheat, British	480 pounds	8.29	13.97	14.74	77.8
Potatoes	Ton	[3] 21.29	23.72	[4] 56.69	166.3
Tea	Pound	[5] .162	[6] .167	[6] .228	40.7
Sugar	Pound	.041	.071	[7] .112	173.2

[1] No. 1 households; London market.
[2] No. 1 Northern Manitoba; London market.
[3] Price in June, 1914.
[4] Price in November, 1916.
[5] Excluding duty; average for first 9 months of 1914.
[6] Excluding duty; price at end of December.
[7] Approximate price in December.

BREAD RATIONING IN FRANCE.[1]

On November 30, 1917, the council of ministers approved a decree organizing a system of bread rationing. The basis adopted limits the amount of grain to be released for the manufacture of bread, the army. Bread tickets are to be issued and distributed by a communal office in communes of more than 20,000 population. In fixing the amount of grain to be released for the manufacture of bread, the needs, habits, and interests of consumers, producers, and intermediaries have been considered. The prefect of each Department estimates the amount of grain necessary, which is thereupon distributed to the millers authorized to furnish flour.

[1] La Republique Française, Dec. 1, 5, and 19, 1917.

A permanent supervising cereal office is established in each Department. All flour mills are placed under State supervision and, in general, all cereals are requisitioned. The State may purchase the grain through committees, millers, or merchants operating as State agents, or acquire it through direct requisition.

The weight, bake, and form of the loaf are not regulated, but all breads, including fancy, health, and diet bread, must be sold by weight, and made from whole wheat flour, excluding impurities only. The price will be uniform in all parts of the State, except as it may be influenced by local conditions.

The use of bread flour for pastry making is prohibited. Pastry made from other materials may only be sold on two days each week. Bread consumers are divided into three classes as determined by age, social condition, etc. The classes with the daily rations allowed are as follows:

1. Those performing heavy manual labor, and having a small income:
   Men over 16 years of age ..... 600 grams (21.2 ounces).
   Women over 16 years of age ..... 500 grams (17.6 ounces).
2. Those doing light work, and having a small income:
   Men over 16 years of age ..... 400 grams (14.1 ounces).
   Women over 16 years of age ..... 300 grams (10.7 ounces).
3. All persons not included in above classes ..... 200 grams (7 ounces).

Supplies are delivered upon presentation of authorized cards issued by the minister through local authorities. The cards are individual, in the name of the applicant. The holder is required to sign the card for himself and minors. The communal office distributes the cards, supervises their use, and cancels such as were issued to deceased persons or to persons who remove. With each card sufficient tickets are issued in amounts of 100 grams each to cover the monthly allowances in favor of the holder.

Cards with all stubs of used tickets and unused tickets are returned at the end of the month, and a new issue made. Provisions are made for issuing tickets to persons temporarily away from their homes, to soldiers on leave or furlough, and to persons temporarily sojourning in a commune. Loaned or sold cards are confiscated. Stolen, lost, or destroyed cards or coupons are not, in general, replaced, but such theft, loss, or destruction must be immediately reported. Makers or users of false books or tickets are subject to prosecution.

Delivery of bread by bakers, restaurant, hotel, or boarding-house keepers otherwise than in exchange for tickets is prohibited. Tickets will be received in exchange for current bread only, or for the equivalent in flour, fancy, diet, or health bread in proportions indicated in a table of equivalents prepared by the public authorities and posted

in the place of sale. Bakers living in a commune not under the card system are not permitted to supply customers living in a commune in which the system is in operation.

Sale of fancy bread, pastry, and confectionery to be eaten on the premises is prohibited.

Provision is made to meet extraordinary demands caused by temporary increase of population. The supply of flour will be withheld from bakers, etc., for failure to observe these regulations.

The decree became effective in Paris and the Department of the Seine on December 20, 1917.[1]

PRICES OF FOOD IN NEW ZEALAND.[2]

In compliance with the cost-of-living act of 1915, the Board of Trade of New Zealand, constituted on March 1, 1916, presented its report covering the period March 1, 1916, to March 31, 1917.

The board was authorized to investigate infringements of the provisions of the commercial trust law of 1910; matters affecting cost of living; supply, demand, and prices of commodities; complaints of unreasonably high prices; questions relating to trade, commerce, or business of New Zealand; markets for goods of home production; and to make recommendations in regard to trade, markets, and means for the encouragement, development, and protection of industry and commerce.

At its first meeting the board decided to investigate the principal causes of high prices.

The first subject considered was wheat and its milled products. The conclusion states that "The distribution of the food supply * * * can not safely be left in a time of crisis to the working of an unregulated system of supply and demand. Prices of flour and by-products require continuous scrutiny. Dealers in grain should be registered and be required to report quantities purchased and prices paid."

In considering price fixing, "recommended prices" instead of "maximum prices" were considered preferable. Subsequent price movements, however, seemed to warrant Government control. The danger of the policy of noninterference was demonstrated by an unwarranted advance of 25 per cent in the price of flour in November, 1916. The Board of Trade thereupon resolved that "It is desir-

[1] La Republique Française, Dec. 19, 1917.
[2] First annual report of the Board of Trade, Wellington, 1917, 26 pp.

able for the Government to fix the maximum price of wheat," "that wheat and flour shall be handled at reasonable rates by merchants, millers, and bakers," and recommended a maximum for best quality of wheat of 6s. 3d. ($1.52) per bushel at country stations.

At a conference of flour millers the following resolutions were adopted: The price of flour should be based upon 48 bushels of wheat yielding 1 ton of flour. The price of pollard (middlings) and bran should be fixed at £6 ($29.20) and £4 ($19.47), respectively, per ton. When the price of wheat is 5s. ($1.22) per bushel the price of flour should be £13 10s. ($65.70) per ton. In consideration of the restoration of "flour duty" and "dumping legislation" forthwith flour should not exceed £14 ($68.13) f. o. b. less 2½ per cent at wheat centers until the Government scheme comes into force.

Evidence was given placing the cost of production at £5 10s. ($26.76) to £8 ($38.93) per acre (including interest on wheat land). Based upon available reports, the average actual yield was 23.09 bushels per acre. It was evident that the Government should control the present supply and encourage production. The course finally agreed upon fixed a maximum price for the 1915–16 crop, and a guarantee of 5s. 10d. ($1.42) per bushel for the crop of 1916–17. Prices of bread were not fixed. Local and ordinary competition "worked on the whole satisfactorily."

Early in December, 1916, reports seemed to indicate a short crop, and the board recommended that the Government acquire an option on 1,500,000 bushels of Australian wheat. Since the ending of the financial year 1,000,000 bushels have been purchased and are being distributed under the supervision of the board.

Local prices of butter rose in sympathy with the record prices ruling in Great Britain. Placing the index number of the price of butter at approximately 105 on April 11, 1914, it rose to 225 on March 7, 1917. Both wholesalers and retailers threatened further advances, and factories threatened "if prices were interfered with they would withdraw supplies from the local market entirely and export their whole output."

The Regulation of Trade and Commerce Act provided that—

"Nothing in this act relative to maximum prices shall extend or apply to the sale of goods which are destined by the purchaser, or believed by the seller on reasonable grounds to be so destined, for exportation and not for consumption in New Zealand." This precluded any remedy by fixation of maximum prices. The measures taken by the Government restricting exportation failed to prevent further advance in local wholesale prices. An investigation showed

that the margin was in favor of export trade. Retailers claimed that the "average cost of running a retail grocery business was 12½ per cent on the turnover," and that they were handling butter at a loss.

After an exhaustive investigation the board came to the conclusion that the retail price should not be allowed to rise indefinitely and recommended a fixed price throughout New Zealand; the prohibition of export of butter and cheese, except under license on certain terms and conditions; fixed maximum wholesale price, from time to time, for butter for local consumption, and limiting distribution charges.

The board prepared a scheme in consonance with the above recommendations. This was approved by the Government, and on October 13, 1916, regulations were gazetted. The validity of this action was tested in the Supreme Court, which declared the "Order in Council to be valid in all respects." The fund derived from licenses "shall be returned to the contributing factories," less expenses of administration. The scheme is said to be working satisfactorily.

The investigation of the meat supply showed a gradual change in the proportion of each kind of beef slaughtered. The following table shows this variation by years, 1913 to 1917, at the Auckland abattoirs:

Beef animals slaughtered.	1913–14	1914–15	1915–16	1916–17 [1]
Oxen	13,117	10,444	7,797	4,702
Cows	4,214	6,500	6,677	3,397
Total	17,331	16,944	14,474	8,099

[1] April to October, 7 months.

For the first and the last full year, the percentages of cows to all slaughtered beef cattle were 24.3 and 46.1, respectively. In one locality for the year ending March 31, 1916, 90 per cent of all sheep and lambs slaughtered were ewes.

The prices of live stock (beef and mutton) had increased over 100 per cent between January, 1912, and March, 1917. During this period prime oxen increased from 23s. ($5.60) to 46s. 6d. ($11.31); cow beef, from 20s. 6d. ($4.99) to 43s. 9d. ($10.65); and sheep, from 17s. 3d. ($4.20) to 34s. 9d. ($8.46) per 100 pounds.

In a few cities arrangements were made by which butchers could be supplied from the imperial store subject to their selling meat at prices deemed reasonable by the board. In other cities agreements have been reached on a price list. At Auckland two retail shops were taken over, at the offer of the owner, by the New Zealand Gov-

ernment. The owner and employees were retained, and a civil service accountant supervises the accounts. One effect directly traceable to the establishment of Government meat shops in Auckland was the steadying of retail prices throughout New Zealand. The upward tendency was checked and in Auckland an actual reduction took place.

While the sugar company possesses a monopoly of the New Zealand sugar trade, it did not make use of its economic position and the conditions created by the war to exploit the public.

Milk, fish, kerosene, coal, etc., prices are among the other items of consumption which came within the purview of the board, and are the subjects of discussion in the report.

WAGES AND HOURS OF LABOR.

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNICIPAL EMPLOYMENT OFFICES, DECEMBER, 1917.

In the following table are shown the prevailing rates of wages paid to workers in 33 selected occupations placed in employment by public employment offices on the last day of December, 1917, or the day nearest the last day in December on which workers were placed. Reports from 89 employment offices from 39 States and the District of Columbia were tabulated as follows: Thirty-five Federal employment offices, 1 Federal-municipal employment office, 9 Federal-State employment offices, 1 Federal-State-municipal employment office, 2 municipal employment offices, 1 municipal-private employment office, 38 State employment offices, and 2 State-municipal employment offices.

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

[Fed.=Federal; Sta.=State; Mun.=Municipal; Pri=private;

State, city, and kind of office.	Blacksmiths.	Boilermakers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Alabama:					
Mobile (Fed.)				$4.00 d.	
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.).	$5.00 d.		$7.00 d.	5.00 d.	$0.30 h.
Arkansas:					
Little Rock (Fed.)	.50 h.			.60 h.	
California:					
Los Angeles (Fed.)	5.00 d.	$5.00 d.	5.00 d.	4.50-5.00 d.	.30 h.
Los Angeles (Sta.-Mun.).	4.00 d.	.52 h.	5.00 d.	4.00 d.	.25 h.
San Diego (Fed.)	4.00 d.			4.00-5.00 d.	.25-.30 h.
San Francisco (Fed.)	5.25 d.	.55 h.		6.50 d.	.25 h.
Santa Barbara (Fed.)				4.50 d.	
Colorado:					
Colorado Springs (Sta.)				5.20 d.	.25 h.
Denver (Fed.)					
Denver No. 2 (Sta.)	4.75 d.	4.65 d.		6.00 d.	.30 h.
Pueblo (Sta.)	3.75 d.				.25 h.
Connecticut:					
Bridgeport (Fed.)	.55 h.			.60 h.	.25 h.
Bridgeport (Sta.)					.25 h.
Hartford (Sta.)					.30 h.
New Haven (Sta.)					1.75 d.
Norwich (Sta.)					1.50 d.
Waterbury (Sta.)					
Delaware:					
Wilmington (Fed.)		.75 h.	.60 h.	.62½ h.	
District of Columbia:					
Washington (Fed.)				.62½ h.	
Florida:					
Jacksonville (Fed.)				3.00-4.00 d.	
Miami (Fed.)				3.00-4.00 d.	
Georgia:					
Savannah (Fed.)	4.00 d.	5.00 d.	5.00 d.	4.00 d.	.75 d.
Idaho:					
Moscow (Fed.)	5.28 d.		8.00 d.	5.28 d.	5.00 w.
Illinois:					
Chicago (Fed.)	4.00 d.			.45 h.	
Chicago (Sta.)	.54-.70 h.	.60 h.	.75 h.	.65 h.	2.10 d.
East St. Louis (Sta.)	.48 h.	.50 h.	.87½ h.	.70 h.	.15 h.
Peoria (Sta.)				.60 h.	2.10 d.
Rockford (Sta.)		.45 h.	.75 h.	.62½ h.	.25 h.
Rock Island (Sta.)	.65 h.	.52-.75 h.	.75 h.	.62½ h.	.25 h.
Springfield (Sta.)	.50 h.		.65 h.	.55 h.	1.50 d.
Indiana:					
Evansville (Sta.)	.25 h.	.30 h.	.60 h.	.45 h.	
Indianapolis (Fed.)				.53 h.	1.50 d.
Indianapolis (Sta.)				3.50-4.50 d.	
South Bend (Sta.)				.50 h.	.25 h.
Terre Haute (Sta.)				.55 h.	
Iowa:					
Des Moines (Fed.-Sta.)				.62½ h.	
Kansas:					
Topeka (Sta.)					
Kentucky:					
Louisville (Sta.)	.50 h.			.40 h.	
Louisville (Mun.-Pri.)				.40 h.	1.10 d.
Louisiana:					
New Orleans (Fed.-Sta.).	5.00 d.	4.72 d.	5.20 d.	6.00 d.	.75 d.
Maryland:					
Baltimore (Fed.)	.50 h.	3.00 d.		.62½ h.	6.00 w.
Massachusetts:					
Boston (Sta.)	4.00-7.00 d.	.47-.60 h.	6.25 d.	5.50 d.	.20 h.
Springfield (Sta.)	.50 h.	.47-.60 h.		.56 h.	7.00-8.00 w.
Worcester (Sta.)				.37½ h.	.22 h.
Michigan:					
Battle Creek (Sta.)		.45 h.		.55 h.	.25 h.
Bay City (Sta.)				.55 h.	2.00 d.
Detroit (Fed.)	.40-.45 h.	.42-.55 h.	.87 h.	.45-.60 h.	.25 h.
Detroit (Sta.)	.50 h.	.55 h.	.65 h.	.60 h.	.25 h.
Flint (Sta.)	.55 h.	.50 h.	.65 h.	.55 h.	.25 h.
Grand Rapids (Sta.)				.35 h.	.20 h.
Jackson (Sta.)	.45 h.	.45 h.	.75 h.	.55 h.	.25 h.
Kalamazoo (Sta.)				.40 h.	.25 h.
Lansing (Sta.)	.55 h.	.60 h.	.70 h.	.60 h.	.25 h.
Muskegon (Sta.)					
Saginaw (Sta.)					1.75 d.

[1] And board. [2] And found. [3] And board and room.

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917.

h=hour; d=day; w=week; m=month; y=year.]

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
.....	.....	.....	.....	.....	.....
$80.00 m.	$65.00 m.	[1] $2.00 d.	.....	$45.00–60.00 m.	.....
.....	.....	.....	.....	30.00 m.	$0.30 h.
20.00 w.	45.00–50.00 m.	2.50 d.	$0.60 h.	25.00–40.00 m.	4.00 d.
15.00 w.	12.00 w.	2.50 d.	.....	[1] 40.00 m.	4.00 d.
[2] 60.00 m.	30.00–40.00 m.	$2.43–2.75 d.	.....	[2] 35.00–40.00 m.	.....
[2] 80.00 m.	40.00 m.	75.00 m.	.....	[2] 2.00 d.	.....
.....	.....	.....	.....	.....	.....
17.00 w.	10.00 w.	.....	.....	35.00 m.	3.50 d.
.....	.....	.....	.....	.....	.....
[3] 70.00 m.	[3] 45.00 m.	3.00 d.	.....	[3] 45.00 m.	.....
1.50 d.	30.00 m.	.....	.....	35.00 m.	.....
20.00 w.	16.00 w.	18.00 w.	.....	35.00 m.	.....
21.00 w.	55.00 m.	18.00 w.	.....	55.00 m.	.....
20.00 w.	.....	17.00 w.	.....	45.00 m.	3.50 d.
.....	.....	14.00 w.	.....	35.00 m.	.....
.....	.....	17.00 w.	.....	40.00 m.	.....
.....	.....	.....	.....	22.50 m.	.....
.....	.....	.....	.....	30.00 m.	.....
.....	.....	.....	.....	.....	.....
[4] 60.00 m.	[4] 5.50 w.	.....	.....	1.25–1.75 d.	.....
[4] 60.00 m.	[4] 5.50 w.	.....	.....	1.25–1.75 d.	.....
1.00 d.	.75 d.	1.00 d.	15.00 w.	9.00 w.	10.00 w.
75.00 m.	40.00 m.	75.00 m.	.....	50.00 m.	3.50 d.
.....	35.00 m.	.....	.....	35.00 m.	.....
75.00–90.00 m.	10.00–12.00 w.	16.00–20.00 w.	.35 h.	35.00–40.00 m.	.....
10.00 w.	6.00 w.	3.00 d.	3.00 d.	35.00 m.	.50 h.
15.00 w.	10.00 w.	2.75 d.	.....	35.00 m.	.....
12.00–15.00 w.	10.00–12.00 w.	.35–.40 h.	.....	45.00–50.00 m.	.40–.50 h.
18.00 w.	8.00 w.	3.00 d.	6.00 d.	40.00 m.	.42½ h.
12.00 w.	7.00 w.	2.70 d.	.....	35.00 m.	.....
.....	.....	.20 h.	.....	1.25 d.	.....
60.00 m.	[1] 9.00 w.	.25 h.	.....	35.00 m.	.....
80.00–125.00 m.	8.00–10.00 w.	2.50 d.	.....	30.00–35.00 m.	.....
20.00 w.	12.00 w.	20.00 w.	.....	30.00 m.	3.00 d.
.....	.....	14.00 w.	.....	1.50 d.	.....
.....	.....	.....	.....	30.00 m.	.....
.....	.....	.....	.....	30.00–50.00 m.	.....
40.00 m.	[3] 5.00 w.	15.00 w.	.....	.....	.....
75.00 m.	5.00 w.	10.00 w.	.....	.....	.....
60.00 m.	15.00 m.	2.00 d.	2.00 d.	1.50 d.	2.24 d.
18.00 w.	8.00 w.	.30 h.	.25–.45 h.	[5] 15.00–30.00 m.	.....
16.00 w.	8.00–12.00 w.	16.00–18.00 w.	.38 h.	[3] 40.00 m.	.43 h.
.....	.....	15.00–18.00 w.	.....	[3] 30.00–35.00 m.	.....
.....	[2] 32.00 m.	18.00 w.	.....	[3] 35.00 m.	.....
14.00 w.	8.00 w.	.30 h.	.....	12.00 m.	.....
.....	60.00 m.	.....	.....	28.00–35.00 m.	.....
3.00–5.00 d.	2.00–3.00 d.	20.00–22.00 w.	.35 h.	30.00–35.00 m.	.40–.45 h.
12.00 w.	10.00 w.	.35 h.	.30 h.	30.00 m.	.45 h.
25.00 w.	15.00 w.	3.00 d.	.....	26.00 m.	.35 h.
.....	60.00 m.	15.00 w.	.....	26.00 m.	.....
60.00–80.00 m.	50.00–75.00 m.	2.70 d.	2.50–3.00 d.	35.00–45.00 m.	.35 h.
15.00 w.	10.00 w.	15.00 w.	.....	30.00 m.	.30 h.
[1] 80.00 m.	[1] 60.00 m.	.35 h.	.....	[1] 35.00 m.	.40 h.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	2.00 d.	.....

[4] And board and lodging.

[5] Married, $25 to $45 per month.

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Alabama:					
Mobile (Fed.)					
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.)	$10.00 w.		$2.50 d.		$10.00 w.
Arkansas:					
Little Rock (Fed.)	5.00 w.	$0.75 h.	.30 h.		
California:					
Los Angeles (Fed.)	30.00 m.	5.00 d.	2.75 d.	$12.00 w.	9.00–10.00 w.
Los Angeles, (Sta.-Mun.)	35.00 m.	4.00 d.	2.50 d.	12.00 w.	8.00 w.
San Diego (Fed.)			3.25 d.		
San Francisco (Fed.)	[1] 20.00–40.00 m.		2.75 d.		1.33–2.00 d.
Santa Barbara (Fed.)	35.00 m.		3.50 d.	14.00 w.	12.00 w.
Colorado:					
Colorado Springs (Sta.)	30.00 m.		.30 h.	2.00 d.	1.50 d.
Denver (Fed.)			.25 h.		
Denver No. 2 (Sta.)	30.00 m.	.82½ h.	.35 h.		1.50 d.
Pueblo (Sta.)	5.00 w.		.30 h.		
Connecticut:					
Bridgeport (Fed.)	30.00 m.		.30 h.	.30 h.	.25 h.
Bridgeport (Sta.)	30.00 m.		.55 h.		.25 h.
Hartford (Sta.)	5.00 w.		.50 h.		
New Haven (Sta.)	7.00 w.		3.15 d.	15.00 w.	1.75 d.
Norwich (Sta.)	35.00 m.			3.00 d.	
Waterbury (Sta.)			2.75 d.		10.00 w.
Delaware:					
Wilmington (Fed.)	5.00 w.		.32 h.		
District of Columbia:					
Washington (Fed.)	25.00 m.		.30 h.		
Florida:					
Jacksonville (Fed.)	[2] 7.00 w.		1.50–2.00 d.		1.50 d.
Miami (Fed.)	[2] 7.00 w.		.25 h.		1.50 d.
Georgia:					
Savannah (Fed.)	4.00 w.	21.00 w.	10.00 w.	9.00 w.	6.00 w.
Idaho:					
Moscow (Fed.)	5.00 w.		3.50 d.		
Illinois:					
Chicago (Fed.)	30.00 m.		32½ h.		9.00 w.
Chicago (Sta.)	6.00–10.00 w.		.27½–.35 h.		
East St. Louis (Sta.)	5.00 w.	.75 h.	3.00 d.	20.00 w.	9.00 w.
Peoria (Sta.)	6.00 w.		.35 h.	13.00 w.	2.10 d.
Rockford (Sta.)	6.00 w.	.65–.75 h.	.40–.50 h.	12.00–14.00 w.	8.00 w.
Rock Island (Sta.)	6.00 w.	.62½ h.	3.00 d.	17.00–25.00 w.	8.00 w.
Springfield (Sta.)	5.00 w.		.20–.30 h.	2.00 d.	1.00 d.
Indiana:					
Evansville (Sta.)	4.00 w.		.20 h.		
Indianapolis (Fed.)	[1] 5.50 w.	.40 h.	.30 h.		6.00 w.
Indianapolis (Sta.)	10.00 w.		2.25–3.00 d.		8.00–10.00 w.
South Bend (Sta.)	6.00 w.		3.00 d.		
Terre Haute (Sta.)			22½–.25 h.		
Iowa:					
Des Moines (Fed.-Sta.)	6.00 w.		.30 h.		
Kentucky:					
Louisville (Sta.)	5.00–6.00 w.		.22½–.35 h.	35.00 m.	
Louisville (Mun.-Pri.)	[1] 1.00 d.	.40 h.	.22½ h.		1.00 d.
Louisiana:					
New Orleans (Fed.-Sta.)	20.00 m.	4.16 d.	2.25 d.	40.00 m.	6.00 w.
Maryland:					
Baltimore (Fed.)	6.00–7.00 w.			10.00–15.00 w.	
Massachusetts:					
Boston (Sta.)	[2] 4.00–8.00 w.	4.00–5.00 d.	2.75–3.25 d.	[2] 45.00–50.00 m.	6.00–10.00 w.
Springfield (Sta.)	[2] 5.00–8.00 w.	.50–.55 h.	.30–.37 h.		[2] 25.00 m.
Worcester (Sta.)	[2] 6.00 w.		3.00 d.		7.00 w.
Michigan:					
Battle Creek (Sta.)	5.00 w.	.50 h.	.25–.30 h.	16.50–18.00 w.	8.00–12.00 w.
Bay City (Sta.)	4.00–7.00 w.	.37 h.	.25–.30 h.		
Detroit (Fed.)	[3] 30.00 m.	.40–.50 h.	.30–.40 h.	18.00–22.00 w.	10.00–15.00 w.
Detroit (Sta.)	6.00–8.00 w.	.50 h.	.35 h.	9.00–20.00 w.	12.00–18.00 w.
Flint (Sta.)	5.00 w.	.45 h.	.30 h.	2.75 d.	1.50 d.
Grand Rapids (Sta.)	4.00–7.00 w.		.30 h.		
Jackson (Sta.)	5.00–7.00 w.	50.00–55.00 m.	.35 h.	18.00–25.00 w.	9.00–12.00 w.
Kalamazoo (Sta.)	5.00 w.		.30 h.		7.00 w.
Lansing (Sta.)	[1] 35.00 m.	.65 h.	.40 h.		
Muskegon (Sta.)	8.00 w.		2.50 d.		
Saginaw (Sta.)	4.00 w.		2.75 d.		

[1] And board. [2] And board and room. [3] And board, lodging, and washing.

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
.....	.....	.....	.....	.....	.....
$0.55 h.	.....	$4.50 d.	$6.00 d.	$6.00 d.	$10.00 w.
.65 h.	.....	.....	6.00 d.	.62½ h.	8.00 w.
5.00 d.	$5.00 d.	5.00 d.	4.50 d.	5.00 d.	9.00–10.00 w.
5.25 d.	4.00 d.	3.50 d.	5.00 d.	4.00 d.	8.00–15.00 w.
.45–.53 h.	.....	.....	.....	.....	.....
5.25 d.	.....	4.25 d.	.....	.....	10.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
4.65 d.	.....	.....	.....	7.50 d.	.....
.50 h.	.....	.....	.....	.....	8.00 w.
.60 h.	.50 h.	.....	.....	.....	.....
.60 h.	.50 h.	.....	.....	.....	.....
.45 h.	.....	.50 h.	.....	.....	.....
.....	.....	18.00 w.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	18.00 w.	.....	.....	.....	.....
.50 h.	.....	.50 h.	.75 h.	.50 h.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
27.00 w.	5.00 d.	21.00 w.	21.00 w.	5.00 d.	2.00 d.
5.28 d.	5.28 d.	5.04 d.	6.00 d.	5.28 d.	.....
3.00–4.50 d.	4.00 d.	.....	.....	.75 h.	8.00–12.00 w.
.35–.55 h.	6.00 d.	.70 h.	.50 h.	5.00 d.	8.00–12.00 w.
.51 h.	.58 h.	.60 h.	.87½ h.	.87½ h.	8.00 w.
.40 h.	.....	.....	.....	.....	.....
.35–.45 h.	.35–.40 h.	.55 h.	.62½ h.	.75 h.	8.00 w.
4.00 d.	4.00 d.	.55 h.	.75 h.	5.45 d.	9.00 w.
.45 h.	.45 h.	.50 h.	.65 h.	.60 h.	8.00–10.00 w.
.....	.....	.45 h.	.....	.....	.....
.37½ h.	.....	.....	.....	.....	6.00–7.00 w.
3.50–4.50 d.	.....	3.50 d.	.....	.....	.....
.60 h.	4.00 d.	4.00 d.	4.00 d.	.60 h.	10.00 w.
.47 h.	.....	.....	.....	.....	.....
.40 h.	.....	.....	.....	.....	.....
.35–.50 h.	.....	.....	.....	.....	6.00–8.00 w.
.....	.....	.....	.....	.....	.....
5.00 d.	5.00 d.	5.50 d.	6.00 d.	6.50 d.	6.00 w.
.45–.60 h.	5.00–7.00 d.	.30–.55 h.	.....	.....	.....
.47–.60 h.	5.00 d.	4.00–5.00 d.	6.00–6.50 d.	5.50 d.	7.00–15.00 w.
.55–.60 h.	.....	.50 h.	.....	.65 h.	.....
.40–.60 h.	4.25 d.	.32 h.	.....	.....	.....
.35 h.	.40 h.	.....	.....	.....	6.00–7.50 w.
.....	.....	.....	.....	.....	5.00–12.00 w.
.45–.60 h.	.50–.55 h.	.45–.60 h.	.60–.75 h.	.75 h.	9.00–15.00 w.
.50 h.	.50 h.	.45 h.	.55 h.	.75 h.	7.00–20.00 w.
.45 h.	.60 h.	.55 h.	.55 h.	.65 h.	10.00 w.
.....	.....	.....	.....	.....	.....
.45 h.	4.50 d.	.40–.45 h.	.50–.60 h.	.60 h.	6.00–12.00 w.
.45 h.	.....	.....	.....	.....	.....
.60 h.	.65 h.	.60 h.	.70 h.	.70 h.	.25 h.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Alabama:					
Mobile (Fed.)					
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.)				$100.00 m.	$75.00 m.
Arkansas:					
Little Rock (Fed.)					
California:					
Los Angeles (Fed.)	$1.00–2.50 d.			85.00 m.	60.00–75.00 m.
Los Angeles (Sta.-Mun.)	2.00 d.			75.00–90.00 m.	60.00–75.00 m.
San Diego (Fed.)				85.00 m.	
San Francisco (Fed.)	2.00 d.			93.50 m.	65.00 m.
Santa Barbara (Fed.)					
Colorado:					
Colorado Springs (Sta.)	1.00 d.		$1.50 d.		
Denver (Fed.)					
Denver No. 2 (Sta.)			2.50 d.		
Pueblo (Sta.)	1.50 d.				10.00 w.
Connecticut:					
Bridgeport (Fed.)					
Bridgeport (Sta.)					
Hartford (Sta.)					
New Haven (Sta.)					
Norwich (Sta.)					
Waterbury (Sta.)					
Delaware:					
Wilmington (Fed.)					1,200.00 y.
District of Columbia:					
Washington (Fed.)				1,000.00 y.	
Florida:					
Jacksonville (Fed.)					
Miami (Fed.)					
Georgia:					
Savannah (Fed.)	9.00 w.	$12.00 w.	9.00 w.	15.00 w.	50.00 m.
Idaho:					
Moscow (Fed.)	2.00 d.		2.00 d.	100.00 m.	75.00 m.
Illinois:					
Chicago (Fed.)	7.00–9.00 w.		8.00–20.00 w.		12.00–20.00 w.
Chicago (Sta.)	7.00–9.00 w.		8.00–15.00 w.	75.00–100.00 m.	18.00–20.00 w.
East St. Louis (Sta.)	.20 h.	30.00 w.	.20 h.	90.00 m.	75.00 m.
Peoria (Sta.)					
Rockford (Sta.)	2.00 d.				35.00–45.00 m.
Rock Island (Sta.)	2.00 d.	80.00 m.	1.50 d.	80.00 m.	60.00 m.
Springfield (Sta.)	2.00 d.			65.00 m.	40.00–60.00 m.
Indiana:					
Evansville (Sta.)					
Indianapolis (Fed.)	2.00 d.				10.00–15.00 w.
Indianapolis (Sta.)					
South Bend (Sta.)				18.00 w.	10.00 w.
Terre Haute (Sta.)					
Iowa:					
Des Moines (Fed.-Sta.)					
Kansas:					
Topeka (Sta.)					
Kentucky:					
Louisville (Sta.)					8.00 w.
Louisville (Mun.-Pri.)					10.00 w.
Louisiana:					
New Orleans (Fed.-Sta.)	6.00 w.	2.75 d.	2.75 d.	75.00 m.	60.00 m.
Maryland:					
Baltimore (Fed.)			10.00 w.	83.00–125.00 m.	15.00 w.
Massachusetts:					
Boston (Sta.)	1.50–2.50 d.	18.00 w.		18.00–25.00 w.	6.00–25.00 w.
Springfield (Sta.)			8.00 w.		
Worcester (Sta.)					15.00 w.
Michigan:					
Battle Creek (Sta.)					12.00–15.00 w.
Bay City (Sta.)					10.00 w.
Detroit (Fed.)	15.00–20.00 w.	18.00–22.00 w.	12.00–18.00 w.	80.00–100.00 m.	15.00–20.00 w.
Detroit (Sta.)					
Flint (Sta.)	2.50 d.	3.00 d.	1.50 d.	80.00 m.	60.00 m.
Grand Rapids (Sta.)					
Jackson (Sta.)	8.00–15.00 w.		8.00–15.00 w.	8.00–20.00 w.	8.00–20.00 w.
Kalamazoo (Sta.)					
Lansing (Sta.)	.25 h.			100.00 m.	75.00 m.
Muskegon (Sta.)			1.50 d.		
Saginaw (Sta.)					

[1] And board. [2] And found. [3] And maintenance.

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
.....	.....	.....	.....	.....	.....
$6.00 d.	$50.00 m.	$15.00 w.	$10.00 w.	[1] $1.75 d.	$1.75 d.
.....	.....	.....	.....	.....	.....
5.00 d.	10.00 w.	15.00 w.	9.00 w.	2.50 d.	.30 h.
4.00 d.	.....	12.00 w.	9.00 w.	2.50 d.	.30 h.
.....	.....	9.00-14.00 w.	9.00 w.	.30 h.	.25 h.
.....	50.00 m.	[2] 49.50 m.	10.00 w.	[2] 2.00 d.	.....
.....	.....	.....	.....	2.25 d.	.....
.....	.....	10.00 w.	8.00 w.	.35 h.	.25 h.
.....	.....	.....	.....	2.50 d.	.25 h.
.....	.....	.....	2.00 d.	.30 h.	.30 h.
.....	.....	.....	1.00 d.	.30 h.	.20 h.
.....	.....	15.00 w.	10.00 w.	.30 h.	.25 h.
.....	.....	.....	10.00 w.	.50 h.	.25 h.
.....	.....	[1] 7.00 w.	.....	.50 h.	.30 h.
.....	.....	.....	7.00 w.	.35 h.	.25 h.
.....	.....	.....	7.00 w.	3.00 d.	1.50 d.
.....	.....	.....	8.00 w.	.35 h.	.....
5.00 d.	.....	.....	.....	.41½ h.	.....
.....	.....	40.00 m.	.....	.30 h.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
5.00 d.	12.00 w.	6.00 w.	5.00 w.	9.00 w.	6.00 w.
.....	.....	60.00 m.	8.00 w.	3.00 d.	2.00 d.
.40-.62½ h.	9.00-14.00 w.	35.00 w.	8.00-10.00 w.	.30 h.	2.10 d.
.70 h.	10.00-12.00 w.	8.00-10.00 w.	9.00-10.00 w.	.27½-.30 h.	.25 h.
.70 h.	10.00 w.	18.00 w.	8.00 w.	.30 h.	.15 h.
.....	.....	9.00 w.	7.00 w.	.....	.....
.....	.....	12.00 w.	1.00-1.50 d.	.25-.35 h.	.20-.25 h.
.62 h.	7.00 w.	10.00 w.	9.00 w.	3.00 d.	.25 h.
.....	24.00 m.	12.00 w.	6.00 w.	.....	.....
.....	.....	.....	.....	.....	.....
.....	8.00 w.	.....	7.00 w.	.....	1.50 d.
.....	.....	12.00-15.00 w.	8.00-10.00 w.	2.50 d.	1.50 d.
.....	30.00 m.	12.00 w.	7.00 w.	.....	.....
.....	.....	[1] 8.00 w.	.....	.25-.35 h.	.....
.....	.....	.....	.....	.30 h.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	2.00 d.	1.10 d.
4.00 d.	45.00 m.	5.00 w.	5.00 w.	1.50 d.	1.00 d.
.....	.....	.....	[3] 7.00 w.	.....	6.00 w.
5.00-7.00 d.	8.50-15.00 w.	[1] 12.00 w.	[4] 7.00 w.	.35 h.	.20 h.
.47-.60 h.	.....	.....	[5] 5.00 w.	.30 h.	.20-.25 h.
.....	.....	[1] 15.00 w.	[1] 7.00 w.	.30 h.	.25 h.
.....	24.00 m.	10.00 w.	6.00-8.00 w.	.30 h.	.25 h.
.....	.....	.....	.....	.25-.60 h.	.15-.25 h.
.50-.60 h.	10.00-12.00 w.	15.00-18.00 w.	8.00-12.00 w.	.32½-.45 h.	.25 h.
.50 h.	.....	[1] 10.00 w.	[1] 8.00 w.	.35 h.	.25 h.
.60 h.	9.00 w.	10.00 w.	7.00 w.	.40 h.	.25 h.
.....	.....	.....	6.00 w.	.30 h.	.20 h.
6.00-7.00 d.	8.00-10.00 w.	9.00 w.	7.00-8.00 w.	.30-.35 h.	.25 h.
.....	.....	.....	5.00 w.	.30 h.	.25 h.
.....	60.00 m.	[1] .25 h.	[1] .20 h.	.35 h.	.25 h.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

[4] And board, at restaurants; $5 and board and room at hotels.

[5] And board and room.

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

State, city, and kind of office.	Blacksmiths.	Boilermakers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Minnesota:					
Minneapolis (Fed.)	$3.00–4.00 d.	$0.40–.60 h.	$0.75 h.	$0.55 h.	$0.35 h.
Minneapolis (Sta.)				.55 h.	2.00 d.
St. Paul (Sta.)	26.46 w.			.55 h.	.25 h.
Mississippi:					
Gulfport (Fed.)			.62½ h.	.50 h.	
Missouri:					
Kansas City (Fed.–Sta.)	5.00 d.	.76½ h.	.75 h.	.65 h.	.25 h.
St. Louis (Fed.–Sta.)		.50 h.		.62½ h.	1.60 d.
Montana:					
Butte (Mun.)					.35 h.
Nebraska:					
Lincoln (Fed.–Sta.)					
Omaha (Fed.–Sta.–Co.–Mun.)				.60 h.	.25 h.
Nevada:					
Reno (Fed.)	4.50 d.			5.00 d.	
New Jersey:					
Jersey City (Fed.)				.45–.62½ h.	1.85 d.
Newark (Fed.–Sta.)	.30 h.		.75 h.	3.75 d.–.62½ h.	
Orange (Fed.–Sta.)	.48 h.			.62½ h.	.25 h.
New York:					
Buffalo (Fed.)					
New York (Fed.)	.55–.70 h.			4.50 d.	
New York City (Mun.)	5.50 d.	5.00 d.	6.00 d.	5.50 d.	8.00–9.00 w.
Ohio:					
Cleveland (Fed.)	.50–.55 h.	.62½ h.	.80 h.	.70 h.	2.00 d.
Oklahoma:					
Oklahoma City (Sta.)	3.50 d.	.55 h.		.60 h.	.20 h.
Tulsa (Sta.)	4.00–5.00 d.	.65 h.	7.00 d.	6.00 d.	.25 h.
Oregon:					
Astoria (Fed.)					
Portland (Fed.–Mun.)	5.25 d.	5.25 d.	7.00 d.	5.60 d.	.30 h.
Pennsylvania:					
Erie (Sta.)	.33 h.			.55 h.	
Johnstown (Sta.)					1.00 d.
Philadelphia (Fed.)		3.50 d.		.62½ h.	
Philadelphia (Fed.–Sta.)					
Pittsburgh (Fed.)	.58 h.	.55 h.	.65 h.	.60 h.	.22 h.
Scranton (Sta.)	.50 h.		.70 h.	.65 h.	1.50 d.
Rhode Island:					
Providence (Fed.)	.47–.60 h.	.47–.60 h.		.50 h.	
South Carolina:					
Charleston (Fed.)				3.50 d.	
Tennessee:					
Memphis (Fed.)				.50 h.	
Texas:					
Dallas (Mun.)	4.00 d.	4.50 d.	8.00 d.	5.00 d.	2.00 d.
El Paso (Fed.)					
Fort Worth (Fed.)					
Galveston (Fed.)				.62½ h.	
Utah:					
Salt Lake City (Fed.)	4.75–6.00 d.	4.05–4.75 d.	6.00 d.	4.50–6.00 d.	1.25–2.00 d.
Virginia:					
Norfolk (Fed.)	.59 h.	.55 h.	.65 h.	.53–.58 h.	1.00 d.
Washington:					
Bellingham (Fed.–Mun.)	4.50 d.	6.00 d.	6.00 d.	5.00 d.	.25 h.
Seattle (Mun.)	4.50–6.00 d.	6.00 d.	5.00 d.	5.00–6.00 d.	.30 h.
Walla Walla (Fed.)	3.00 d.				
Yakima (Fed.)					.30 h.
Wisconsin:					
La Crosse (Sta.–Mun.)					.20–.25 h.
Milwaukee (Fed.–Sta.–Mun.)	.45 h.		.50 h.	.50 h.	25.00 m.
Oshkosh (Sta.–Mun.)	.50 h.			.50 h.	.20 h.
Superior (Sta.–Mun.)	5.00 d.	4.75 d.	.80 h.	.60 h.	.30 h.
Wyoming:					
Cheyenne (Fed.–Sta.)				.65 h.	.25 h.

[1] And board and room for single men; married men, $45 per month.
[2] And board.

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$60.00–75.00 m.	$7.00–15.00 w.	$15.00–18.00 w.	$2.50–3.00 d.	$20.00–50.00 m.	$0.50 h.
70.00 m.	9.00 w.	3.00 d.	.....	30.00 m.	.....
.....	50.00 m.	3.10 d.	.....	25.00 m.	.....
.....	.....	11.00 w.	.....	.....	.....
21.00 w.	12.00–14.00 w.	18.00 w.	.25 h.	35.00 m.	.45 h.
60.00 m.	30.00 m.	12.00 w.	.....	[1] 25.00 m.	.....
25.00–38.00 w.	17.50 w.	.....	.....	45.00 m.	.....
.....	8.00 w.	.....	.....	40.00 m.	.....
75.00 m.	60.00 m.	3.00 d.	.....	40.00 m.	.....
70.00 m.	50.00 m.	.....	.....	45.00 m.	.....
.....	.....	18.00 w.	.....	30.00 m.	.....
30.00–35.00 m.	30.00–35.00 m.	12.00–18.00 w.	.....	25.00–40.00 m.	.....
.....	30.00–40.00 m.	12.00 w.	.37½ h.	.....	.....
.....	.....	.....	.....	25.00–40.00 m.	.....
60.00 m.	.....	35.00 m.	.....	35.00 m.	.....
25.00 w.	30.00–60.00 m.	20.00 w.	3.50 d.	45.00 m.	3.40 d.
.....	.....	18.00 w.	.35 h.	30.00 m.	.45 h.
15.00 w.	10.00 w.	.25 h.	.....	25.00 m.	.....
75.00–125.00 m.	7.00–16.00 w.	2.75–3.25 d.	.....	25.00–40.00 m.	.40–.45 h.
45.00 m.	.....	.....	.....	.....	.....
75.00–100.00 m.	40.00–80.00 m.	3.00–3.50 d.	.60–1.00 h.	40.00–60.00 m.	4.50 d.
[2] 16.00 w.	.....	18.00–20.00 w.	.....	[3] 30.00 m.	.....
75.00 m.	7.00 w.	70.00 m.	.....	.....	.....
15.00–25.00 w.	8.00–15.00 w.	3.00 d.	.....	.....	.....
.....	.....	.....	.....	[4] 35.00–40.00 m.	.....
20.00 w.	12.00 w.	3.50 d.	.....	40.00 m.	.....
50.00 m.	6.00–12.00 w.	16.00 w.	.....	[2] 1.50 d.	.....
.....	.....	18.00 w.	.40 h.	30.00–35.00 m.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	25.00 m.	.....
90.00 m.	7.00 w.	15.00 w.	.....	[2] 30.00 m.	2.50 d.
.....	.....	.....	.....	.....	.....
[5] 33.00 m.	.....	.....	.....	.....	.....
.....	3.00 w.	.....	.....	25.00 m.	.....
40.00–125.00 m.	35.00–75.00 m.	3.00–4.00 d.	.....	40.00–75.00 m.	4.50–5.00 d.
50.00–100.00 m.	4.00–6.00 w.	.....	.25–.30 h.	15.00–35.00 m.	.....
60.00–80.00 m.	30.00–50.00 m.	3.00–3.50 d.	3.20–5.00 d.	40.00–50.00 m.	3.50–4.00 d.
60.00–125.00 m.	35.00–75.00 m.	3.25–3.75 d.	.35–.50 h.	30.00–75.00 m.	3.00–3.50 d.
3.00 d.	35.00 m.	.....	.....	50.00 m.	.....
100.00 m.	.....	[2] 2.00 d.	.....	[2] 35.00–45.00 m.	.....
.....	.....	.....	.....	15.00–30.00 m.	.....
100.00 m.	40.00 m.	3.00 d.	.40 h.	35.00 m.	.40 h.
.....	5.10 w.	.....	.....	30.00 m.	.....
75.00 m.	50.00 m.	20.00 w.	.36 h.	45.00 m.	.40 h.
18.00 w.	.....	3.50 d.	.....	40.00 m.	24.00 w.

[3] And board; married men, $35 and house, garden, etc.
[4] And board; married men, $45–$50 and privileges.
[5] And all expenses.

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Minnesota:					
Minneapolis (Fed.)	$5.00– 9.00 w.	$0.62½ h.	$2.50 d.	$15.00–18.00 w.	$7.00 w.
Minneapolis (Sta.)	5.00 w.		.30 h.		8.00 w.
St. Paul (Sta.)	20.00 m.		2.75 d.	2.50 d.	
Mississippi:					
Gulfport (Fed.)					
Missouri:					
Kansas City (Fed.-Sta.)	5.00– 7.00 w.	.75 h.	.42½ h.	20.00 w.	5.00–9.00 w.
St. Louis (Fed.-Sta.)	[1] 25.00 m.		.32½ h.		1.00 d.
Montana:					
Butte (Mun.)	30.00–35.00 m.		4.25 d.		
Nebraska:					
Lincoln (Fed.-Sta.)			2.50 d.		
Omaha (Fed.-Sta.-Co.-Mun.)	7.00 w.		.30– .35 h.		
Nevada:					
Reno (Fed.)	35.00 m.		.35 h.		
New Jersey:					
Jersey City (Fed.)	25.00 m.		.27– .37½ h.		
Newark (Fed.-Sta.)	30.00–35.00 m.		.30– .40 h.		
Orange (Fed.-Sta.)	30.00–35.00 m.	18.00 w.	2.50 d.		
New York:					
Buffalo (Fed.)			.30– .35 h.		
New York (Fed.)		.35– .40 h.	.37½ h.		
New York City (Mun.)	25.00–40.00 m.	5.30 d.	3.50 d.	18.00 w.	2.00 d.
Ohio:					
Cleveland (Fed.)	7.00– 8.00 w.	.78½ h.	.35 h.		
Oklahoma:					
Oklahoma City (Sta.)	5.00 w.		.30 h.		.15 h.
Tulsa (Sta.)	5.00–10.00 w.	5.50– 7.00 d.	.25– .45 h.		7.00–14.00 w.
Oregon:					
Astoria (Fed.)			3.50 d.	3.00 d.	
Portland (Fed.-Mun.)	30.00–40.00 m.	4.50 d.	.35 h.	15.00–21.00 w.	8.64–12.00 w.
Pennsylvania:					
Erie (Sta.)		.30 h.	.22– .45 h.		
Johnstown (Sta.)	5.00– 6.00 w.		.30 h.		1.00 d.
Philadelphia (Fed.)			.30– .40 h.		5.00– 7.00 w.
Philadelphia (Fed.-Sta.)					
Pittsburgh (Fed.)	7.00 w.	.45 h.	.34 h.	15.00 w.	8.00 w.
Scranton (Sta.)	4.00 w.	.60 h.	.30 h.		
Rhode Island:					
Providence (Fed.)			.45 h.		7.00 w.
South Carolina:					
Charleston (Fed.)			1.75 d.		
Tennessee:					
Memphis (Fed.)			.25– .30 h.		
Texas:					
Dallas (Mun.)	5.00 w.		2.25 d.	15.00 w.	10.00 w.
El Paso (Fed.)	4.50 w.		1.75 d.		
Fort Worth (Fed.)			2.00 d.		1.25 d.
Galveston (Fed.)					
Utah:					
Salt Lake City (Fed.)	5.00–10.00 w.	5.60 d.	2.90–3.50 d.	16.00–25.00 w.	1.25– 2.50 d.
Virginia:					
Norfolk (Fed.)	4.00– 6.00 w.	.59 h.	.25– .30 h.		
Washington:					
Bellingham (Fed.-Mun.)	4.00– 5.00 w.	4.00 d.	3.00 d.	15.00–18.00 w.	8.00– 9.00 w.
Seattle (Mun.)	15.00–45.00 m.	4.00 d.	3.00–3.50 d.	15.00–18.00 w.	2.10 d.
Walla Walla (Fed.)	6.00 w.		.30 h.		
Yakima (Fed.)			.35 h.		
Wisconsin:					
La Crosse (Sta.-Mun.)	4.00– 6.00 w.		.20– .25 h.		
Milwaukee (Fed.-Sta.-Mun.)	5.00 w.	.35 h.	.39 h.	12.00 w.	7.00 w.
Oshkosh (Sta.-Mun.)	4.00 w.				
Superior (Sta.-Mun.)	25.00 m.	.56 h.	.35 h.	20.00 w.	12.00 w.
Wyoming:					
Cheyenne (Fed.-Sta.)	9.00 w.		.35 h.	20.00 w.	11.00 w.

[1] And room and board.

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$3.00–4.00 d.	$3.00–4.00 d.	$0.55 h.	$0.75 h.	$0.72 h.	$8.00 w.
.42½ h.	.....	.....	.....	.....	7.50 w.
.....	.....	.35 h.	.....	.....	.....
.....	.....	.....	.....	6.00 d.	.....
.55 h.	.50 h.	.60 h.	7.00 d.	6.00 d.	6.00 w.
.60 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.45 h.	.....	.....	.....
.75 h.	.....	.55 h.	.....	6.00 d.	.....
5.00 d.	.....	.....	.....	.....	.....
.50– .75 h.	.....	.....	.....	.....	.....
.40– .60 h.	.....	4.00– 4.50 d.	.....	.62½–.75 h.	.....
.52 h.	.....	.....	.....	.....	10.00 w.
.35– .47½ h.	.....	.....	.....	.....	.....
6.00 d.	6.00 d.	5.00 d.	6.00 d.	6.00 d.	10.00–15.00 w.
.50– .70 h.	4.50 d.	.60 h.	.75 h.	.81¼ h.	.....
.....	.....	.....	.....	.....	.....
.....	.45– .52½ h.	.65 h.	7.00 d.	7.00 d.	8.00–15.00 w.
.....	.....	.....	.....	.....	.....
5.25 d.	5.25 d.	4.50 d.	7.00 d.	6.50 d.	8.64–15.00 w.
.30– .65 h.	.30– .45 h.	.42½ h.	.....	.....	.....
.44 h.	.....	.45 h.	.....	.....	6.00 w.
.55– .60 h.	4.50– 6.00 d.	.59 h.	.....	.....	8.00 w.
.....	.....	.....	.....	.....	.....
.55 h.	5.00 d.	.45 h.	.....	.75 h.	10.00 w.
.45 h.	.45 h.	.60 h.	.....	.70 h.	.....
.47– .60 h.	.50– .59½ h.	.....	.....	.....	.....
.....	.....	.....	.....	.60 h.	.....
.....	.....	.....	.....	.....	.....
5.00 d.	.....	4.50 d.	8.00 d.	6.00 d.	15.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	81¼ h.	.....
.....	.....	.....	.....	.....	.....
3.60– 5.75 d.	6.00 d.	5.50– 6.00 d.	7.00 d.	6.50 d.	.90– 1.75 d.
.59 h.	.50– .55 h.	.46– .52 h.	.63 h.	.....	8.00–15.00 w.
.50– .75 h.	6.00 d.	4.00 d.	5.00 d.	.75 h.	6.00–12.00 w.
4.00– 6.00 d.	.....	3.00– 4.00 d.	5.00 d.	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
2.50– 3.00 d.	.....	.....	.....	.....	.....
.45 h.	.45 h.	.37½ h.	.....	.....	6.00 w.
.45 h.	.....	.....	.....	.....	8.00 w.
5.00 d.	4.50 d.	.50 h.	.70 h.	.70 h.	12.00 w.
.43 h.	.....	.70 h.	.....	.....	.....

RATES OF WAGES OF EMPLOYEES PLACED BY FEDERAL, STATE, AND MUNIC

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Minnesota:					
Minneapolis (Fed.)	$8.00–40.00 w.	$18.00–35.00 w.	$12.00 w.	$18.00–21.00 w.	$40.00–75.00 m.
Minneapolis (Sta.)	2.00 d.		8.00 w.	65.00 m.	12.00 w.
St. Paul (Sta.)					
Mississippi:					
Gulfport (Fed.)					
Missouri:					
Kansas City (Fed.-Sta.)	2.50 d.			20.00 w.	15.00 w.
St. Louis (Fed.-Sta.)	2.00 d.		2.25 d.		75.00 m.
Montana:					
Butte (Mun.)					
Nebraska:					
Lincoln (Fed.-Sta.)				75.00 m.	65.00 m.
Omaha (Fed.-Sta.-Co.-Mun.)				80.00 m.	70.00 m.
Nevada:					
Reno (Fed.)					
New Jersey:					
Jersey City (Fed.)					8.00–15.00 w.
Newark (Fed.-Sta.)				8.00–22.00 w.	8.00–22.00 w.
Orange (Fed.-Sta.)					
New York:					
Buffalo (Fed.)					
New York (Fed.)					
New York City (Mun.)	2.50 d.	30.00 w.		25.00 w.	15.00–25.00 w.
Ohio:					
Cleveland (Fed.)			9.00–12.00 w.	80.00 m.	65.00 m.
Oklahoma:					
Oklahoma City (Sta.)				75.00 m.	60.00 m.
Tulsa (Sta.)	1.00–2.00 d.		1.50–2.00 d.	75.00–125.00 m.	65.00–100.00 m.
Oregon:					
Astoria (Fed.)					
Portland (Fed.-Mun.)	2.00 d.		8.64–12.00 w.	80.00–125.00 m.	60.00–100.00 m.
Pennsylvania:					
Erie (Sta.)					14.00–15.00 w.
Johnstown (Sta.)					
Philadelphia (Fed.)	1.50–3.00 d.		9.00–18.00 w.	18.00–30.00 w.	12.00–18.00 w.
Philadelphia (Fed.-Sta.)					
Pittsburgh (Fed.)	1.50 d.			75.00 m.	
Scranton (Sta.)	3.00 d.			50.00 m.	10.00 w.
Rhode Island:					
Providence (Fed.)	.17 h.		.17 h.	3.00 d.	8.00 w.
South Carolina:					
Charleston (Fed.)					13.00 w.
Tennessee:					
Memphis (Fed.)					
Texas:					
Dallas (Mun.)	2.50 d.		12.00 w.	75.00 m.	50.00 m.
El Paso (Fed.)					
Fort Worth (Fed.)	2.00 d.				
Galveston (Fed.)					
Utah:					
Salt Lake City (Fed.)	1.50–2.00 d.	20.00–25.00 w.	1.00–2.25 d.	45.00–125.00 m.	40.00–75.00 m.
Virginia:					
Norfolk (Fed.)	10.00–15.00 w.				
Washington:					
Bellingham (Fed.-Mun.)	2.00–3.00 d.			75.00–100.00 m.	25.00–75.00 m.
Seattle (Mun.)	2.00 d.			85.00 m.	
Walla Walla (Fed.)					
Yakima (Fed.)					
Wisconsin:					
La Crosse (Sta.-Mun.)					
Milwaukee (Fed.-Sta.-Mun.)	3.00 d.	15.00 w.	8.00 w.	80.00 m.	50.00 m.
Oshkosh (Sta.-Mun.)	1.25 d.				
Superior (Sta.-Mun.)					
Wyoming:					
Cheyenne (Fed.-Sta.)					

IPAL EMPLOYMENT OFFICES DURING THE MONTH OF DECEMBER, 1917—Concluded.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
$0.45–0.50 h.	$40.00–50.00 m.	$15.00 w.	$7.00–12.00 w.	$0.30–0.35 h.	$0.30–0.35 h.
.....	7.00 w.	12.00 w.	8.00 w.	.35 h.	1.75 d.
.....	.....	.....	18.00 m.	.35 h.	.....
.....	.....	.....	.....	.....	.....
5.25 d.	10.00 w.	14.00 w.	8.00 w.	.30 h.	2.10 d.
.....	40.00 m.	.....	1.10 d.	.30 h.	7.50 w.
.....	.....	.....	14.00 w.	.....	.....
.....	.....	12.00 w.	10.00 w.	.30 h.	.25 h.
.75 h.	.....	15.00 w.	10.00 w.	.....	.....
.....	.....	2.00 d.	2.00 d.	.35 h.	.35 h.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	1.85 d.
.....	.....	.....	6.00–7.00 w.	.30 h.	1.75 d.
.....	.....	.....	.....	.30–.35 h.	.....
6.00 d.	10.00–16.00 w.	20.00 w.	3.50–8.00 w.	3.00 d.	2.00 d.
.80 h.	10.00 w.	.....	.....	.....	.....
.....	.....	10.00 w.	1.00 d.	.30 h.	.15 h.
.65 h.	.....	9.00–12.00 w.	7.00–11.00 w.	.25–.40 h.	.25–.30 h.
5.00–6.00 d.	9.00–15.90 w.	13.00–18.00 w.	10.00–12.00 w.	.35 h.	.30 h.
.65 h.	.....	.....	.....	.30 h.	.20 h.
.....	.....	.....	5.00 w.	.....	.....
.66⅔ h.	.....	.....	4.00–8.00 w.	3.00–3.50 d.	1.60–2.00 d.
.45 h.	.....	15.00 w.	10.00 w.	3.00 d.	1.50 d.
.....	9.00 w.	.....	.....	.25 h.	.....
.47–.60 h.	13.00 w.	.....	.....	.....	.....
.....	1.50 d.	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
5.00 d.	45.00 m.	15.00 w.	12.00 w.	2.00 d.	1.50 d.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
6.50 d.	21.00–60.00 m.	15.00 w.	30.00–40.00 m.	.30–.40 h.	.25–.30 h.
.....	.....	.....	.....	.....	.....
.....	.....	15.00–20.00 w.	8.00–10.00 w.	.30 h.	.25 h.
.....	.....	10.00–16.00 w.	1.50– 2.00 d.	.35–.40 h.	.30 h.
.....	.....	.....	10.00 w.	.30 h.	.25 h.
.....	.....	.....	.....	.35 h.	.30 h.
.....	.....	.....	.....	.30 h.	.20 h.
.....	.....	14.00 w.	6.00 w.	.30 h.	.25 h.
.....	.....	.....	.....	.25 h.	.20 h.
.68 h.	10.00 w.	15.00 w.	10.00 w.	.35 h.	.30 h.
.....	.....	.....	.....	.25 h.	.....

WAGES AND HOURS OF LABOR IN THE IRON AND STEEL INDUSTRY.

This bureau has just published a report (Bulletin 218) which is a continuation of its former reports on wages and hours of labor in the iron and steel industry. This statistical record ends with May, 1915, a time when the late general depression in the industry was lessening, but at a time when hourly earnings still were at a low level. The depression while not affecting the rates of pay which had been materially increased in the spring of 1913, did, by affecting the tonnage output and consequently the incentive for rapid work, so decrease the earnings per hour of tonnage workers, that the combined full-time weekly earnings of time and tonnage workers in May, 1915, as compared with May, 1913, were decreased 4 per cent in blast furnaces, 10 per cent in Bessemer plants, 1 per cent in open-hearth plants, 5 per cent in blooming mills, 3 per cent in standard rail mills, 4 per cent in bar mills, and 5 per cent in sheet mills. The weekly earnings in plate mills were unchanged and tin-plate mills showed an increase of 3 per cent.

In addition to the regular tables showing wages and hours of labor a complete presentation is made in this report, by percentages, of the turns worked and the amounts of pay rolls, in the ten departments of the industry discussed, during each month of the two-year period ending June, 1915, which covers the greater part of the general depression. These monthly statements clearly show the increasing activity in the several departments from January to June, 1915, while other text and tabular statements exhibit the remarkable increases in employment and in rates of pay and earnings in the iron and steel industry between January, 1915, and January, 1917. In the latter period approximately 100 of the principal iron and steel plants of the country reported an increase in employees of over 50 per cent and in total pay rolls of over 125 per cent.

The reduction in seven-day work through the introduction of relief gangs which began in 1910 increased to such an extent that in blast furnace plants, the department in which operations are continuous, only 59 per cent of the employees worked seven days per week in 1915, as compared with 80 per cent in 1913, 95 per cent in 1910, and 97 per cent in 1907.

The wide range of average full-time weekly earnings in the iron and steel industry is shown by the following list, including a few

of the unskilled, semiskilled, and skilled occupations for 1915, selected from the various departments:

Blast furnaces:	
Laborers	$12.20
Keepers	18.33
Blowers	26.93
Bessemer converters:	
Mold cappers	17.53
Steel pourers	27.96
Vesselmen	30.87
Blooming mills:	
Bottom makers' helpers	12.46
Manipulators	25.81
Heaters	40.06
Plate mills:	
Shearmen's helpers	17.89
Table operators, sheared	22.63
Screwmen, sheared	32.61
Bar mills:	
Bundlers	13.38
Roughers	25.76
Rollers	56.75
Sheet mills:	
Openers	$11.93
Doublers	19.42
Sheet heaters	37.19
Open hearth furnaces:	
Stockers	15.41
Stopper setters	21.96
Melters' helpers, first	32.80
Standard rail mills:	
Hot-bed men	12.54
Table-lever men	22.92
Rollers	43.09
Puddling mills:	
Bloom boys	10.62
Puddlers	20.45
Heaters	36.37
Tin-plate mills:	
Screw boys	16.59
Catchers	20.87
Shearmen	29.55

A similarity in earnings by no means indicates a similarity in full-time weekly hours; for example, it will be noticed that the full-time weekly earnings of blast furnace keepers were only $1.09 less than those for sheet mill doublers, but the working time differed greatly in the two occupations, the average full-time hours per week of keepers being 79.4, while that of doublers was only 42.8.

The rate of wages paid common laborers is to a large extent a basic rate from which are determined the rates for other occupations requiring little skill, hence the rate for common labor is of importance beyond the limits of the occupation proper. The rate per hour is practically the same in all departments of a plant, but the earnings per day or week, of course, are determined by the number of hours worked. The average rate per hour of laborers in 1915 in the 10 departments covered by this report was 18 cents while the average full-time hours per week ranged from 57.5 to 74.3, and the average full-time weekly earnings from $9.66 to $14.31.

A valuable addition to this report is a glossary of iron and steel occupational terms, covering not only the principal occupations but many of the minor ones as well. The glossary will be of great service in any study of labor conditions in the iron and steel industry.

MINIMUM WAGE.

RESULTS OF MINIMUM-WAGE LEGISLATION IN CALIFORNIA CANNING INDUSTRY.

In May, 1917, the California Industrial Welfare Commission issued a report (Bulletin No. 1) on the regulation of wages, hours, and working conditions of women and minors in the fruit and vegetable canning industry of the State,[1] which is devoted largely to a study of the effects of certain rulings of the commission on the industry during the season of 1916. These rulings, or orders, established sanitary standards, hours of labor, and minimum piece rates for canning and cutting apricots, peaches, pears and tomatoes, and time rates applicable to any occupation.[2] The portions of these orders relating to wages and hours of labor are given in full:

No person, firm, or corporation shall employ or suffer or permit any woman or minor to work in the fruit and vegetable canning industry in any of the following occupations at piecework rates less than the following:[3]

Piece rates.	
Cutting:	
Apricots	$0.225 per 100 pounds.
Pears	.375 per 100 pounds.
Cling peaches	.225 per 100 pounds.
Free peaches	.125 per 100 pounds.
Tomatoes	.03 per 12 quarts.
Canning:	
All varieties of fruit, No. 2½ cans	.015 per dozen cans.
All varieties of fruit, No. 10 cans	.036 per dozen cans.
Tomatoes, No. 2½ cans	.01 per dozen cans.
Tomatoes, No. 10 cans	.024 per dozen cans.
Time rates.	
Experienced hands, (that is, experience of over three weeks)	.16 per hour.
Inexperienced hands	.13 per hour.

[1] California. Industrial Welfare Commission. Bulletin No. 1. Report on the regulation of wages, hours, and working conditions of women and minors in the fruit and vegetable canning industry of California, Sacramento, 1917. 176 pp. Illustrated.

[2] The wages board in the fruit and vegetable canning industry, upon whose recommendation the piece rates established by the commission were based, after slight modification, devoted its attention primarily to the matter of piece rates because over 90 per cent of the women employed in the industry work on this basis. The piece rates were made to apply only to apricots, peaches, pears, and tomatoes, because "they constitute 80 per cent of the fruit and vegetable pack of the State."

[3] It should be stated in this connection that these orders have been superseded by orders of Apr. 16, 1917, effective June 16, 1917, applicable to the 1917 pack. See MONTHLY REVIEW for July, 1917, pp. 57 and 58.

No person, firm, or corporation shall employ or suffer or permit an adult woman, 18 years of age or over, to work in the fruit and vegetable canning industry for more than 10 hours in any one day, or more than 60 hours in any one week, except in case of emergency; provided, however, that in no case shall the hours of employment of any woman exceed 72 hours in any one week * * *

No person, firm, or corporation shall employ or suffer or permit any adult woman, 18 years of age or over, to work in case of emergency at a wage less than one and one-fourth times the foregoing minimum time or piece rates. Emergency work shall be all work performed by any woman in excess of 10 hours in any one day, or all work performed by any woman or minor in excess of 6 calendar days in any one week.

No person, firm, or corporation shall employ or suffer or permit any minor child, under the age of 18 years, to work in the fruit and vegetable canning industry for more than 8 hours in any one day or more than 48 hours in any one week.

The 1916 pack of fruit and vegetables was the largest in the history of the State, the output being 7,000,000 cases of fruit and 4,000,000 cases of vegetables, valued at approximately $25,000,000. The 101 canneries operating employed upwards of 22,000 women and children and nearly half as many men, the largest number of women employed at any one time being 12,000. The industry, of course, is highly seasonal in character, the average time for 62 establishments being 18.9 weeks. The question of labor turnover appears to be a very serious one for the report states that in city canneries 20 per cent of the women stayed less than one week and 40 per cent stayed less than 4 weeks. This of course means low earnings for the women, and confusion, inefficiency, and lessened profits for the management. What is characterized as "un-American standards of labor" have grown up in the industry in the past due largely to the fact that a great deal of immigrant labor has been employed, so that the task of the industrial welfare commission has been to overcome these abuses and establish American standards.

The problem of child labor seems to be solving itself, since employers have found that it does not pay. In 41 canneries in 1916 only 1,092 children were working, as compared with 2,344 children employed in the same canneries in 1914—a reduction of 53.4 per cent in 2 years. Many establishments employ no children under 16 years of age, and the largest city canneries in San Francisco and Los Angeles employ practically none under 18 years of age.

The report seems to refute the claim made by some that "the minimum will become the maximum," for it is shown that the rulings of the commission resulted in raising even higher than the minimum the piece rates payable to workers. Thus, it appears that of apricots 43.6 per cent were packed at rates higher than the minimum; of free peaches, 27.6 per cent; of cling peaches, 17.8 per cent; of

pears, 11.7 per cent; and of tomatoes, 3.9 per cent. Nor was the objection that piece rates already higher than the established minimum would be reduced to the fixed rates found to be valid; for in 50 instances, on the five products, rates higher than the minimum rates were paid in 1915, and in only one instance was a reduction made to meet the minimum rates.

The following table, compiled from the report, shows the number of canneries scheduled, the range of rates paid for the preparation of each specified article in 1915 and 1916, and the total wages paid in 1916 together with the total wages that would have been paid had all factories maintained the 1915 rates:

COMPARISON OF RATES PAID IN 1915 AND 1916 FOR PREPARATION OF EACH SPECIFIED PRODUCT, SHOWING TOTAL WAGES PAID IN 1916 AND TOTAL THAT WOULD HAVE BEEN PAID HAD THE 1915 RATES BEEN MAINTAINED IN ALL FACTORIES.

Product.	Number of canneries.	Minimum rate per 100 pounds.		Wage cost of preparation in 1916.			Per cent of 1916 pack payable at—		Number of canneries paying more than minimum rate.	
		1915	1916	At 1916 rates.	At 1915 rates.	Per cent of increase	Minimum rate.	Higher than minimum rate.	1915	1916
		Cents.	*Cents.*							
Cling peaches	54	15 to 28.6	22.5 to 31.2	$211,086.60	$197,716.66	6.8	82.2	17.8	7	11
Pears	32	31.3 to 50	37.5 to 50	163,316.92	159,286.85	2.5	88.3	11.7	5	7
Apricots	51	15 to 37.5	22.5 to 37.5	90,103.00	81,903.17	9.1	56.4	43.6	16	27
Tomatoes	31	[1] 2.5 to 4.0	[1] 3.0 to 4.0	88,761.02	86,011.31	3.2	96.1	3.9	4	6
Free peaches	46	10 to 17.8	12.5 to 16.7	38,471.44	38,634.54	([2])	72.4	27.6	18	20

[1] Per 12 quarts. [2] Decrease; less than one one-hundredth of 1 per cent.

One portion of the report considers the matter of the yielding power of piece rates established by the commission, in which it is shown that the hourly production of workers under the new 1916 piece rates was increased sufficiently to raise the average minimum hourly earnings considerably over the average minimum hourly earnings which it had been determined could be made based upon the hourly production under the piece rates formerly in force. For example, take the case of cling peaches. At the minimum rate of 22.5 cents per 100 pounds, it was found that hourly production should equal 71.1 pounds in order to yield an average wage of 16 cents an hour. Under the new rates the total average hourly production was found to be 90.3 pounds, which is equivalent to average hourly earnings of 20.9 cents, or 4.9 cents above the minimum hourly wages established by the commission. This condition was found to exist also in canneries handling pears, free peaches, and tomatoes, but not in canneries handling apricots, where the total average hourly

earnings, under the new piece rates, amounted to only 13.7 cents, or 2.3 cents below the 16-cent minimum.

The report also includes a statement of production in the products on which no minimum piece rates had been fixed, comprising asparagus, cherries, apples, string beans, spinach, berries, pimentos, beets, quinces, onions, chilis, plums, grapes, maraschino cherries, peas, and cling and free peaches (hand peeled), showing that the average hourly earnings of workers in these products were lower than in the products produced under the established rates. In a chapter on average hourly earnings, certain factors which operated to increase or decrease production and earnings are noted and explained, among these being (1) the principal product of the cannery; (2) the district, in relation to the principal product; (3) the proportion of minors employed; (4) the length of the season; (5) the turnover in labor force; (6) the length of hours worked. A summary of the factors of production is presented in a table detailed by districts, the following being a recapitulation covering 62 canneries in the State:

Number of canneries	62
Average hourly earnings of workers (cents)	18.1
Average length of season (weeks)	18.9
Total number of adults employed	18,150
Total number of minors employed	1,711
Total number employed	19,861
Per cent of minors to total employed	8.6
Number employed the entire season	2,964
Per cent of total	14.9
Total number of woman hours worked during the season	5,937,706
Number of weeks cutters exceeded 60 hours	127
Number of weeks cutters worked 48 to 60 hours	279
Number of weeks cutters worked less than 48 hours	525
Number of weeks canners exceeded 60 hours	224
Number of weeks canners worked 48 to 60 hours	250
Number of weeks canners worked less than 48 hours	399

The hours worked in most canneries are said to be very irregular, but, it is added, they have been gradually reduced from year to year, because the canneries "have learned what other lines of industry have learned, that excessive hours of work are not efficient from the viewpoint of output, to say nothing of the consideration of the welfare of the workers. The length of day now depends largely upon the class of women employed and the type of management." A table is given showing that 45.2 per cent of the canners and 55.9 per cent of the cutters worked less than 48 hours per week. The seasonal nature of the work is best illustrated by the fact that 55.5

per cent of the total pack was handled within a period of eight weeks.

As to the effect of the commission's rulings on sanitation, the report gives a comparative statement of the conditions in certain factories in 1915 and 1916, showing marked improvements in provision for the comport and health of the workers.

The report closes with a preliminary report on the possibility or practicability of providing seats for women while at work, in which the investigator states the conclusion that "there is no good reason why compulsory standing or compulsory sitting on the part of women cannery workers should not soon be a thing of the past. There is no question but that a free choice of position on the part of the worker and the shortening of the motions required on her part will reduce fatigue and hence increase output."

WAGES, HOURS, AND WORKING CONDITIONS OF WOMEN IN LAUNDRIES AND STORES IN KANSAS.[1]

The creation of the Kansas Industrial Welfare Commission was authorized by legislative enactment approved March 6, 1915, effective July 1 following, and consists of the commissioner of labor and two others appointed by the governor. The law creating the commission provides—

> That it shall be unlawful to employ women, learners, and apprentices and minors in any industry or occupation within the State of Kansas under conditions of labor detrimental to their health or welfare, and it shall be unlawful to employ women, learners, and apprentices and minors in any industry within the State of Kansas at wages which are not adequate for their maintenance and for more hours in any one day than is consonant with their health and welfare.

The law further provides that if after any investigation the commission is of the opinion that wages, hours, sanitary or other conditions need regulating, it may, upon recommendation through a board made up of representatives of employers of the occupation in question, representatives of employees, and one or more of the disinterested public, make and render such orders as may be proper and necessary to carry out the recommendation and determinations of the board. The act thus authorizes the commission to establish a minimum wage and determine the hours for female workers. The report states that in the hope of remedying the working conditions of the greatest number of women workers the commission directed

[1] Kansas. Industrial welfare commission. First biennial report. From July 1, 1915, to June 30, 1917. Topeka, 1917. 65 pp.

its efforts first to an investigation of the laundry and mercantile industries.

Of 780 women workers in 85 laundries, the commission found that 27.2 per cent received less than $6 per week, 50.1 per cent received $6 but under $8, while only 15.3 per cent received $8 but under $10, and 7.4 per cent received $10 or more per week. The hours worked by 517 (66.3 per cent) of these women were found to be 9 but under 10, while 227 (29.1 per cent) were required to work 10 hours or over. Only 102 (13.1 per cent) were working under 48 hours per week, while 54 (6.9 per cent) were working 60 hours and over per week. Referring to a group of workers, the number not being given in the report, it is shown that 73.1 per cent received less than $6 per week; that length of time which they worked for the same firm has not had much influence on their wages; that 25 per cent had finished the eighth grade in school, while 45 per cent had not finished the sixth grade; that 64.7 per cent lived at home; that 61.5 per cent were giving assistance to or entirely supporting their families; that 46 per cent remained with the same firm less than one year; and that 94.1 per cent worked 9 hours or longer each day.

Two sets of figures are presented covering the conditions of women workers in mercantile establishments, those collected by the Department of Labor and those gathered by the welfare commission. Referring to the latter figures, of 1,625 women from whom data as to earnings were obtained, 26 per cent received less than $6 per week, 43 per cent received less than $7 per week, and 53.7 per cent received less than $8 per week, while 1,481, or 91.1 per cent, worked 9 hours but under 10 per day, and 121, or 7.4 per cent, worked under 9 hours. The Department of Labor figures reveal a somewhat better condition. Of 1,552 workers, 238, or 15.3 per cent, received under $6 per week; 487, or 31.4 per cent, received less than $7 per week; and 683, or 44 per cent, received under $8 per week; while all the workers recorded worked 9 hours and over per day.

In a group of mercantile workers the welfare commission found that 41.1 per cent had finished the 8th grade in school, that 47 per cent were entirely self-supporting, and that 28.7 per cent had remained with the same firm less than one year. About 35 per cent had been with the same firm over 5 years.

Affecting both the laundry and mercantile workers, the welfare commission has approved the recommendations of the respective boards as to hours of labor as follows:

For laundry workers: Nine hours shall constitute a regular day's work for female laborers in laundries in this State; and no female person shall be required to work more than 10 hours in any one day, not more than 54 hours in any one week.

For mercantile workers: No female person shall be employed in any mercantile establishment in the State of Kansas except during 10 consecutive hours of any day of 24 hours, and for not more than 9 hours during the said 10 hours; and for not more than 6 days during each week; and no female person shall be employed later than 9 o'clock at night in any one day.

It does not appear from the report that minimum wages have been established by the commission. The commission has, however, approved the establishment of a sanitary code for each industry, the following for the mercantile workers being typical:

No person, firm, or corporation subject to chapter 275 of the session laws of 1915 shall employ or permit any female person to work in any mercantile establishment in the State of Kansas in which the conditions do not conform to the following standards:

1. Cleanliness: Every room and the floors, walls, ceilings, windows, and every other part thereof, and all fixtures therein, shall at all times be kept in a clean and sanitary condition.

2. Drinking water: A sufficient quantity of safe, fresh drinking water, within reasonable access to all workers, shall be provided, with sanitary appliances for drinking. A common drinking cup shall not be used. When the water is iced the ice shall not be in the same container as the water.

3. Lighting: All rooms shall be properly and adequately lighted during working hours. Artificial illumination in every work room shall be installed, arranged, and used, so that the light furnished will at all times be sufficient and adequate for the work carried on therein, and prevent unnecessary strain on the vision or glare on the eyes of the worker.

4. Ventilation: The ventilation of each room shall be adequate, and there shall be sufficient provision for preventing excessive humidity, and an amount of cubic air space necessary to health must be allowed for each employee.

5. Toilet rooms: In every establishment there shall be provided suitable and convenient toilets, separate from those used by the opposite sex, and the number of such toilets shall be not less than one to every 20 female persons employed at one time, or majority fraction thereof. Such toilets must be thoroughly ventilated and open to the outside air, and such toilets must, at all times, be kept in a clean and sanitary condition.

6. Wash rooms: Wash-room accommodations, separate and apart from those used by male persons, must be provided, and individual towels, either cloth or paper, must be furnished. The washing facilities must be adequate, and the wash rooms must be kept in a clean and sanitary condition.

7. Dressing rooms: A suitable space, effectively screened, must be provided for female persons to change their street clothes for working clothes, and, where practical, individual lockers should be provided. A cot for emergency purposes shall be provided.

8. Where there are less than four female persons employed by any person the industrial welfare commission may, upon application and showing, release each applicant from compliance with the foregoing regulations or any part of same.

The commission made some investigation of the cost of living of these workers, the result being set forth in the following table:

ESTIMATED COST OF LIVING MADE BY WOMEN WORKERS IN MERCANTILE ESTABLISHMENTS AND LAUNDRIES IN KANSAS.

Item.	Mercantile establishments.		Laundries.	
	Weekly.	Annually.	Weekly.	Annually.
Board and room	$5.01	$260.65	$4.64	$240.80
Clothing	2.08	108.07	1.19	62.00
Books, papers, magazines, amusements, vacations	.61	31.87	.26	13.74
Laundry	.53	27.77	.27	14.05
Total	8.23	428.36	6.36	330.59

With a total annual living expense of $330.59 for laundry workers, and of $428.36 for mercantile workers, it can be seen that a weekly wage even of $8 would leave very little surplus for the former and a deficit for the latter. Of course, as has been stated, most of the girls live at home, thus probably reducing their expenses for board and room, so that a minimum wage of $8 per week would leave a larger surplus than is apparent from the table.

CHILD LABOR.

PRESIDENT'S POSITION ON SAFEGUARDING OF WOMAN AND CHILD LABOR.

The following statement has been made by the President in a letter to the chairman of the National Child Labor Committee under date of December 20, 1917, in regard to the safeguarding of woman and child labor:[1]

As the labor situation created by the war develops, I am more interested than ever, if that were possible, in throwing all the safeguards possible around the labor of women and children in order that no intolerable or injurious burden may be placed upon them. I am, therefore, very glad indeed that the National Child Labor Committee is diligently continuing its labors and extending its vigilance in this important matter. By doing so it is contributing to efficiency and economy of production, as well as to the preservation of life and health.

CHILDREN LEAVING SCHOOL TO GO TO WORK IN WALTHAM, MASS.

The United States Children's Bureau has recently issued a report[2] presenting the result of a study of children leaving school under 16 years of age to go to work in Waltham, Mass., an industrial community of about 30,000 inhabitants. Although the study was made in October and November, 1914, it is stated that no material change has occurred in the manner in which children are prepared for industry and commercial occupations in Waltham and the conclusions as to such preparation are therefore substantially valid as applied to present conditions. Information was obtained concerning 200, or 40 per cent of the 500 literate[3] children between the ages of 14 and

[1] Official Bulletin, Jan. 2, 1918, p. 4.

[2] From School to Work: A study of children leaving school under 16 years of age to go to work in Waltham, Mass., an industrial community of about 30,000 inhabitants, by Margaret Hutton Abels. United States Department of Labor, Children's Bureau. Washington, 1917. 59 pp.

[3] The report states that illiterate children are those who can not read, write, and spell in the English language, in accordance with the requirements for the completion of the fourth grade of the public schools. Under the law which was in force until September 1, 1913, illiterate children over 14 years of age could be employed provided they were regular attendants at public evening schools. Under the law (Acts of 1913, ch. 779) which went into effect September 1, 1913, however, illiterate children under 16 can not obtain employment certificates. This inquiry covers a period during which both of these laws were in effect.

16 years who took out their first employment certificates during the period from September 1, 1911, to October 31, 1914, their ages, therefore, at the time of the inquiry ranging from 14 to 19 years. The data gathered includes facts as to the age, sex, nativity, the living conditions of working children in Waltham; reasons why the children leave school, where they work, what occupations they enter, the conditions under which they work, what wages they earn, how steadily they are employed, and what opportunities they have for advancement. Over four-fifths of the children studied were native Americans, and 59 per cent were born in Waltham; 95 per cent were living with their parents or other relatives.

The following excerpts taken from the report indicate the provisions of law covering the employment of children in Massachusetts:

Under the laws of Massachusetts every child between 14 and 16 years of age must attend school, unless he has received an employment certificate and is engaged in some regular employment or business for at least six hours a day, or has the written permission of the superintendent of schools to engage in profitable employment at home, or is mentally or physically unfit to attend school. No child may be employed in any factory, workshop, or manufacturing, mechanical, or mercantile establishment unless the employer procures and keeps on file an employment certificate, except that children may work in mercantile establishments on Saturdays between 7 a. m. and 6 p. m. without certificates.

The older group of minors, those between 16 and 21 years of age, may not work in factories, workshops, or manufacturing, mechanical ,or mercantile establishments without educational certificates. These certificates are intended to enforce the attendance upon evening schools of illiterate minors—that is, children who can not read, write, and spell in the English language in accordance with the requirements for the completion of the fourth grade of the public schools. Illiterate children must attend public evening schools, if such are established in the city or town in which they reside, for the whole time during which the public evening schools are in session.

The most remarkable initial fact brought out by the study was the marked decrease in the number of children under 16 years of age granted employment certificates, and also the decrease in the proportion of children granted employment certificates immediately upon passing the compulsory school age. During the year ending March 31, 1913, under the old law, employment certificates were issued to 215[1] children (118 boys and 97 girls), while under the new law during the year ending March 31, 1915, employment certificates were issued to 106 children (79 boys and 27 girls), a decrease of 50.7 per cent. In the first period, of the total number of children to whom employment certificates were issued, about two-thirds (143, or 66.5 per cent) were between 14 and 15 years of age, and in the second

[1] These figures are not the result of the investigation, but are taken from the annual reports of the Waltham school board for 1913 and 1915, and from records of home permits in the office of the superintendent of schools.

period only a little more than one-third (38, or 35.8 per cent) were between these ages. Of 168 children between the ages of 13 and 16 years, for whom data were obtained, 39.3 per cent left school between the ages of 14 and 14½ years, and 63.1 per cent left school between the ages of 14 and 15 years.

The report states that the reasons for leaving school to go to work most commonly given by the children were those indicating a lack of adjustment between the school and the child. For example, 50 per cent of the children gave such reasons as dislike of school, backwardness in school, or trouble with the teachers. Over one-third (34.5 per cent) gave economic necessity as their primary reason; about one-tenth (10.7 per cent) gave preference for work as their first reason; 4.8 per cent stated that it was their parents' wish that they leave school. "This showing as to the large proportion of children who go to work in Waltham because their families need their earnings, agrees with the findings in the Commonwealth at large and in other communities where child labor has been investigated." Yet, the report states that in some cases the need was not so apparent since it is possible that the idle adult wage earner would not have been idle if the children had not been contributing to the family's income. Only about one-third (32.1 per cent) of the children who gave economic need as the reason for leaving school and reporting the amount of their initial wages, received $5 or more a week in their first employment; 35.7 per cent received $4 to $4.99 a week, and 32.1 per cent received less than $4 a week.

Taking up the school reasons given by 50 per cent of the children, it appears that 17.9 per cent of the 168 reporting left school because of backwardness in their studies, and 32.2 per cent left because of dislike for school or trouble with their teachers. The extent of retardation[1] of these pupils is indicated in the following table which also gives the school standing of 442 children of the same ages in the public schools of Waltham in September, 1914.

[1] The standard of retardation in this report is determined by the assumption that children who are 6 and 7 years of age in the first grade, 7 or 8 years of age in the second grade, 8 or 9 years of age in the third grade, and so on, are called normal.

SCHOOL STANDING OF REGULAR WORKERS WHO LEFT SCHOOL TO GO TO WORK COMPARED WITH THAT OF PUPILS IN SCHOOL IN SEPTEMBER, 1914.

School standing.	Regular workers who finally left school at 14 but under 16 years of age.		Children 14 but under 16 years of age in public schools September, 1914.	
	Number.	Per cent.	Number.	Per cent.
In advance of normal grade	2	1.3	54	12.2
In normal grade	26	17.0	225	50.9
Retarded:				
1 year	31	20.3	69	15.6
2 years	31	20.3	41	9.3
3 years	30	19.6	21	4.8
4 years	18	11.8	17	3.8
5 years	11	7.2	13	2.9
6 years	4	2.6	2	.5
Total retarded	125	81.7	163	36.9
Grand total	[1] 153	100.0	442	100.0

[1] Of the 200 children studied 32 were vacation workers and were still in school, 2 did not report the last grade attended, 6 left school between 13 and 14 years of age, and 7 had returned to school after working and finally left school at 16 and 17 years of age.

This table shows that retardation in school was much more general among the children between 14 and 16 years of age who left school to go to work than among the children of the same ages attending the public schools in 1914. Of the former group 81.7 per cent were retarded; of the latter, 36.9 per cent.

It seems that most of the children who left school (65 per cent) entered manufacturing establishments, while 13.5 per cent entered mercantile establishments, but it is noted in this connection that at the time of the inquiry there had been many changes of positions so that at that time only 55 per cent, a decrease of 15.4 per cent, were employed in manufacturing establishments, while 18 per cent, an increase of 33.3 per cent, were employed in mercantile establishments. The proportion of employment certificates issued for work in manufacturing establishments decreased from 81.9 per cent in 1913 to 55.2 in 1915, while the proportion of employment certificates issued for work in mercantile establishments increased from 4.2 per cent in 1913 to 10.5 per cent in 1915.

The chief reason for this change is the law prohibiting the employment of children under 16 years of age for more than eight hours a day. Children under 16 years of age in factories appear to have been gradually replaced by older children, who are not subject to the eight-hour law.

A striking fact brought out in the analysis of the wages received by these working children is that those who left school as soon as they had reached the age of 14 years received lower initial wages and advanced more slowly than those who remained in school until they were 15 or 16. It is stated that for all the children who reported initial and latest wages and ages at the time of beginning work, in-

cluding those whose latest wages were the same or lower than their initial wages, the average annual rate of increase in weekly wages[1] was $1.13, and that those children who began work at 14, but under 14½ years of age, received an average annual rate of increase in their weekly wages of 92 cents, as compared with the following rates for those who began work at more advanced ages: Ninety-six cents for those who began at 14½ but under 15; $1.12 for those who began at 15 but under 15½ years; and $1.92 for those who began at 15½ but under 16 years. There was a similar marked tendency among those whose latest wages were greater than their initial wages. It is noted that the length of time these children were at work was a less important factor in the increase of wages than the age at which the children began work. These facts are brought out in the following table:

AVERAGE WEEKLY WAGES AND AVERAGE RATE OF INCREASE PER YEAR[a] IN WEEKLY WAGES RECEIVED BY CHILDREN[b] OF EACH SPECIFIED AGE AT THE TIME OF BEGINNING WORK, AND AVERAGE NUMBER OF MONTHS CHILDREN HAD BEEN AT WORK.

Age at time of beginning work.	All children.				Children whose latest wages were greater than their initial wages.			
	Number.	Average number of months at work.[c]	Average weekly wages.	Average rate of increase per year in weekly wages.	Number.	Per cent all children.	Average number of months at work.	Average rate of increase per year in weekly wages.
14 but under 14½ years	59	22.0	$4.10	$0.92	40	67.8	24.9	$1.45
14½ but under 15 years	33	24.6	4.46	.96	20	60.6	27.2	1.64
15 but under 15½ years	28	18.9	4.80	1.12	20	71.4	20.2	1.97
15½ but under 16 years	21	19.5	4.99	1.92	17	81.0	21.4	2.38
14 but under 16 years	141	21.6	4.46	1.13	97	68.8	23.8	1.76

[a] See footnote below.
[b] Children who reported initial and latest wages and age at the time of beginning work.
[c] Including time idle between jobs.

A table is given in the report showing that most of the children (75.8 per cent) turned their entire earnings into the family pocketbook.

Other points developed by the inquiry are summarized in the report as follows:

Slack work accounted for 30.6 per cent of the cases of leaving jobs for which the reasons of leaving were reported, while 21.2 per cent of the changes were due to dissatisfaction with work. Other reasons for terminating employment reported by the children were: Return to school (12.1 per cent), securing better job (9.4 per cent), physical disability (8.1 per cent), discharge as a result of

[1] The report states that this was computed by dividing the amount of increase in weekly wages by the number of months elapsed between the date of beginning work and the date of visit, if child was still employed, or the date of termination of last job if child was idle at date of visit, and multiplying the quotient by 12.

the child-labor law of 1913 (6.4 per cent), disagreement with others, discharge, and miscellaneous reasons (12.1 per cent).

Eleven and five-tenths per cent of the children were neither working nor in school at the time of the inquiry. The prospect for the large majority of the children was unsteady work, in monotonous occupations, with little opportunity to increase their earnings.

No special training for the occupations which they entered had been received by any of these children in the public schools.

The law limiting the hours of labor of children under 16 years of age to eight a day was apparently obeyed by most Waltham employers. The legal provision requiring the return of employment certificates within two days after the cessation of work by the child was not well observed.

The study here outlined seems to show that children in Waltham who leave school between 14 and 16 years of age are not adapted to industry, and only in the few cases where the workers are "learning the business" does industry make the necessary adaptation to the child. It is apparent that if anything is to be done for the children who are working or for those who may be compelled to work before reaching the age of 16 years, it must be done by the public schools. Proceeding on this basis the report suggests that, pending a more complete study of the industries and of the schools, an important step toward the solution of the problems of child labor, vocational guidance, and vocational education in Waltham, would be to secure a trained vocational adviser who would give his full time to the work.

Such an officer would study the industries of the community, secure the cooperation of employers, and map out a plan for vocational education which would be adapted to the needs of Waltham children. A vocational adviser would also study the children who are desirous of leaving school to go to work, their home problems and their ambitions, and suggest more schooling or a different kind of schooling, or advise in regard to their choice of employment, and assist them in finding suitable positions. In addition to giving vocational advice, such an officer might well be given the duties of issuing and checking up all employment certificates and compiling statistics of juvenile labor.

The report suggests a list of occupations in which 37 boys and 17 girls expressed a desire for training, but adds that 59 per cent of those interviewed thought that they would not take advantage of vocational training if it were offered.

RELATION BETWEEN JUVENILE DELINQUENCY AND JUVENILE EMPLOYMENT.

In England the war has brought about a considerable relaxation of the rules concerning school attendance and the employment of children. England has also seen a considerable increase in juvenile delinquency since the outbreak of the war. No one supposes that

this is due entirely to the increase in juvenile employment, but there is generally believed to be a connection between the two. When, therefore, as an immediate consequence of the entrance of the United States into the war, there was a demand for the suspension or modification of the laws restricting the employment of women and children, the national child labor committee felt that it was desirable to see whether any conclusion could safely be drawn as to the probable effect of such a relaxation upon the problem of juvenile delinquency:

> It has seemed wise to the national child labor committee, as one of its measures of child protection during the war, to begin a series of studies in various juvenile courts and reformatories over the country for the purpose of assembling all possible information on the relationship between juvenile delinquency and employment.

The results of the first of these investigations have recently been published.[1] Based upon the records of the Manhattan branch of the children's court, it deals with 1,792 children, 1,628 boys and 164 girls, aged 7 but under 16 years, who passed through this court in 1916. No children were included who were brought in merely for investigation, or who presented really cases of improper guardianship rather than of delinquency, or who were so mentally defective as to require commitment to custodial institutions, or who were acquitted or discharged after trial. Everyone of those studied had been not only accused but convicted of some real offense against State law or city ordinance.

The first conclusion appearing from the data presented is that working children are unduly numerous among these offenders. Of the boys 614, or 37.7 per cent, and of the girls 68, or 41.5 per cent, had been employed previously to their arrest. As nearly as could be estimated not more than 10 per cent of the children between 7 and 16, resident in the borough of Manhattan, were employed during 1916.

> On this basis the working children contribute four times their share to the ranks of juvenile delinquency. Should we double our estimate of the number of working children, they would still be sending twice their due proportion to the court.

There is a great difference, however, in the character of the offenses charged against these children, and it might be possible that the working children, while furnishing more than their proportionate share of culprits, were responsible for the more trivial delinquencies. To test this, seven offenses were selected as being the most serious; for these the numbers of working and nonworking offenders were as follows:

[1] The Child Labor Bulletin, 105 E. 22d St., New York City, November, 1917, pp. 161–200.

NUMBER OF WORKING AND OF NONWORKING CHILDREN COMMITTING THE MORE SERIOUS OFFENSES.

Offense.	Working.		Nonworking.		Total.
	Boys.	Girls.	Boys.	Girls.	
Arson	2		3	1	6
Assault	36		54		90
Disorderly conduct	77	4	200		281
Drug selling	3		1		4
Drunkenness	2	1	3		6
Forgery	1	2			3
Incorrigibility	111	25	192	22	350
Sex offenses	13	30	22	22	87
Theft	266	5	505	10	786
Other offenses	103	1	34	1	139
Total	614	68	1,014	56	1,752

That is to say, the working children, who are estimated to form approximately one-tenth of the population aged 7 but under 16, furnish not far from four-tenths (36.8 per cent) of the offenders charged with serious wrongdoing, while the nonworking nine-tenths furnish but a trifle over six-tenths of the serious offenders (63.2 per cent). The undue proportion from the ranks of the workers is about as apparent among those committing serious offenses as it is in the whole group.

Another important test is the prevalence of recidivism in the two classes, a matter which is felt to have a decided bearing upon the seriousness of a given offender's situation.

A child may yield to temptation once as the result of curiosity or thoughtlessness, but one court experience should forever damp his ardor for continued experiments with the law of the land. The recidivist, or repeating offender, is recognized by criminologists as the great problem in penal institutions, and the superintendents of juvenile reformatories know that the habit of transgression, once established, is broken with the utmost difficulty.

The following table shows the situation among the boys[1] in this respect:

RECIDIVISM AMONG WORKING AND NONWORKING BOYS.

Number of convictions on delinquency charge.	Number.			Per cent.	
	Working.	Nonworking.	Total.	Working.	Nonworking.
1	347	729	1,076	56.51	71.89
2	144	186	330	23.45	18.34
3	69	69	138	11.24	6.80
4	31	25	56	5.05	2.47
5	16	3	19	2.61	.30
6	6	1	7	.98	.10
7	1	1	2	.16	.10
Total	614	1,014	1,628	100.00	100.00

Percentage of recidivism among working boys 43
Percentage of recidivism among nonworking boys 28

[1] Only 16 of the girls studied had made more than one appearance in court, a number too small to justify any conclusions.

The percentage of recidivism among the working boys is notably higher than among the nonworking, but even more striking is the difference in the proportion the two classes furnish to the total group of recidivists. Of the 552 recidivists, 48 per cent come from the working and 52 per cent from the nonworking boys.

In the proportion of offenders coming from their ranks, in the proportion committing serious offenses, and in the proportion of recidivists, the working children compare unfavorably with the nonworking. In order to see whether this difference can be accounted for by other circumstances than that of employment, the report considers several factors which might possibly be contributory, such as age, school grade completed, nationality (i. e., whether children of foreign or native born parents), and character of home. In none of these respects was there any striking dissimilarity between the two groups.

In other respects the findings of this report are much the same as those of other investigations into juvenile delinquency. Theft is the leading offense among the boys, accounting for 47 per cent of the total number of cases; incorrigibility and disorderly conduct stand next in order, accounting together for 35.6 per cent of the cases. The most numerous group, 241, or 39 per cent of the 614 boys at work, were delivery, errand, and wagon boys; newsboys come next with 146, or 23.8 per cent of the whole; 47 were employed in factories; 32 as street traders; 23 as office boys; 21 as bootblacks; and 21 in stores and markets, no other occupation showing as many as 10 enrolled. Cases in which there was a direct connection between the occupation and the offense were relatively most numerous in the small group, numbering nine, working in amusement resorts, six of these showing the direct connection; this, however, is accounted for by the fact that in most of these cases the fact that the child was employed in the place at all constituted the offense for which he was brought into court. Among the street traders direct-connection cases form 56 per cent, among the newsboys 33 per cent, among the delivery, errand, and wagon boys 23 per cent, and among the bootblacks 38 per cent of the total cases.

As a result of the study the investigators feel strongly that there should be no relaxation of the school attendance and child-labor laws.

It would be absurd to claim that all working children become delinquents, and there are undoubtedly individual cases where the shift from school to industry has proved the making of the boy, but in general the evidence is massed on the other side.

In view of the evidence brought out in this study that employment tends to delinquency, can the American people afford to run the risk of increasing juvenile delinquency now by demolishing labor laws and lowering the standards of compulsory education, thereby increasing the number of children employed? Must the children of the Nation carry, in this way as in many others, an undue share of the burden of war?

THE NEGRO IN INDUSTRY.

THE NEGRO MIGRANT IN PITTSBURGH.

An estimated increase in the Pittsburgh district during a period of little more than a year of 18,550 Negroes, of whom about 9,750 were workers, has presented a formidable problem in social economics, having an important bearing upon the lives of the Negroes themselves and the community in which they reside. A realization that this problem is primarily one relating to housing, rents, health, recreation and social conditions generally prompted an intensive study[1] in the summer of 1917 of the negro migrant in the hope of contributing "something toward the orientation and adjustment of the newcomers" that would "prove of value to those members of both races who have already seen in the migration new opportunity for a people whose need has been bitter, as well as a chance for manifold human service," and with the desire of "offering suggestions to those workers in other cities who are dealing with the same many-sided and baffling problem."

A most serious aspect of the problem was found to be the matter of housing. The report states that because of the high cost of materials and labor, incident to the war, and because of investment attractions other than in realty, but few houses have been built and practically no improvements have been made, the result being the employment of attics, cellars, storerooms, basements, churches, sheds, and warehouses for the accommodation of Negroes, and conditions that are confusing and shocking and that breed disease, crime, and vice. Data were secured from over 500 individuals. Of 465 Negroes, 50 per cent were found to be rooming and boarding, most of these being single men, and 35 per cent, mostly families, were living in tenements. As indicating the congestion existing, of 390 men without families 111 (28.5 per cent) were sleeping two in a room, 98 (25.1 per cent) 4 in a room, 61 (15.6 per cent) 3 in a room, and 57 (14.6 per cent) over 6 in a room, while only 22 (5.6 per cent) had individual bedrooms. Fifty per cent were sleeping two in a bed, and 13 per cent were sleeping 3 or more in a bed. Of 157 Negro families, 49 per cent were living in one room and 21 per cent in two rooms.

The rents paid in rooming houses by 305 roomers ranged from $1.50 to more than $3 per week, 55 per cent paying the lower figure and only 2.5 per cent paying over $3. The board paid by 268 men

[1] The Negro Migrant in Pittsburgh, by Abraham Epstein. School of Economics, University of Pittsburgh. Pittsburgh, 1918. 75 pp. Illustrated.

ranged from $2 per week to more than $8 per week, the largest number, 77, or 28.7 per cent, paying $6 per week. Rents paid by 142 families investigated ranged from $10 to over $25 per month, most of them (42.3 per cent) paying $15 per month. It appears that for the accommodations provided, to say nothing of absence of conveniences, these rents are excessive.

The report makes the point that this great influx of Negro labor into Pittsburgh has not resulted in an over supply of labor, nor has it interfered with the opportunity of white labor. "Every man is needed, as there are more jobs than men to fill them. Pittsburgh's industrial life is for the time being dependent upon the Negro labor supply." but the migration has created a problem in housing that seems to be reflecting to the disadvantage of the Negro himself and of the community at large.

A comparison of working hours required of these migrants in the South and in Pittsburgh shows that while 51 per cent work 10 hours per day in the latter place, only 38 per cent had to work that many hours before leaving home; and that while 27 per cent were required to work less than 10 hours in the South, the percentage was only 16 in Pittsburgh. The wages received are generally higher in Pittsburgh than in the South, 56 per cent of the Negroes receiving less than $2 a day before coming North while only 5 per cent were receiving less than that amount in their new field of labor. Sixty-two per cent were receiving $2 to $3 per day in Pittsburgh, while only 25 per cent were in this wage group in the South. However, 15 per cent received over $3.60 per day in the South; and only 5 per cent were receiving more than $3.60 in Pittsburgh.

Most of the Negroes gave as their reason for emigrating the fact that higher wages and economic opportunity had attracted them, while many thought that they would be better treated than at home. Failure, however, on the part of the city to provide decent homes in order to retain labor appears to be influencing the Negroes to move elsewhere, indicated by the statement that of 330 men only 92, or 27.9 per cent, said that they intended to remain in Pittsburgh.

Under the caption "The Negro's own problem," the report presents some facts as to the opportunities offered in Pittsburgh for the political, social, and economic advancement of the Negroes who have settled in the city. The survey indicates that the southern migrants are not as well established in the city's industries as the white laborers, about 95 per cent of those in the steel mills visited doing unskilled work and receiving wages of from 27½ cents to 33 cents per hour. Considerable prejudice against Negro workers was found to exist among white workers. The charge, however, that the Negroes were brought in to break up the labor movement does not appear to

be substantiated. "The number of Negroes taking the places of striking whites and of skilled white workers is so small that it is hardly appreciable." No effective effort seems to have been made to organize these unskilled laborers. They are admitted to membership in two unions and readily become good unionists, but the sentiment seems to be against their becoming members.

In presenting the community's problem the report takes up in some detail a study of delinquency among Negroes in Pittsburgh. Police station records show that the number of arrests on petty charges, such as suspicion, drunkenness, and disorderly conduct, etc., increased greatly in 1916–17 over 1914–15, while the graver crimes, as a whole, remained stable in spite of the increase in population and in some of the crimes which are usually credited to Negroes there is a marked decline. Most of those arrested were between 20 and 30 years of age and were unmarried.

The number of Negro charges in the juvenile courts during the first six months of 1917 was actually 23 lower, in spite of the increase of population, than during the corresponding period in 1915, the figures being 60 and 83, respectively. The author concludes "that the Negro migrant is not a vicious character; is not criminally and mischievously inclined per se, but on the other hand is a peaceful and law-abiding individual. He comes to Pittsburgh to seek better economic and social opportunities. He is in most instances anxious to let others alone in order that he himself may be let alone."

The statistics gathered relating to the health of the Negroes in Pittsburgh tend to confirm a fact already recognized, that the conservation of health is not so much a problem of the individual as of the whole community, and, in the case of the Negro, is interrelated with his social, moral, industrial, housing, and racial situation. Tables are given showing an increase of 78.6 per cent in the number of deaths in the first 7 months of 1917 as compared with the same period in 1915, before the migration, and this in face of the fact that the Negro population increased about 45 per cent in the same time. Climatic conditions may be responsible for this to a large extent, since the record shows an increase of about 186 per cent in the deaths from pneumonia.

The report concludes with some constructive suggestions looking toward the solution of a race problem through race cooperation. In order to solve the problem of social and industrial maladjustment, lack of organization and absence of intelligent guidance, the National League on Urban Conditions among Negroes, composed of white and colored men, with branches in 18 cities, is attempting to secure cooperation among the races and to act as a social medium between the two peoples.

EMPLOYMENT AND UNEMPLOYMENT.

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of December, 1917, and in cases where figures are available, for the corresponding month in 1916. For the United States figures are given from Federal-State employment offices in two States, a Federal-municipal employment office in one State, State employment offices in 15 States, a State-county-municipal employment office in one State, State-municipal employment offices in two States, municipal employment offices in five States, and a municipal-private employment office in one State. Figures from two Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.
California:												
Fresno (State)	.....	477	.....	1,050	.....	[1] 546	.....	(2)	.....	1,016	.....	918
Los Angeles (State-municipal)[3]	2,439	3,273	5,031	5,045	1,839	2,496	(2)	(2)	4,917	4,989	4,363	3,937
Oakland (State)	695	1,018	865	1,604	462	[1] 852	380	(2)	884	1,471	700	1,096
Sacramento (State)	214	275	641	740	294	[1] 462	231	(2)	549	734	489	659
San Francisco (State)	907	1,867	1,526	3,567	1,682	[1] 1,798	473	(2)	1,618	3,741	1,121	2,932
Total	.....	.....	.....	.....	.....	.....	.....	.....	7,968	11,951	6,673	9,542
Colorado:												
Colorado Springs (State)	(2)	356	457	356	392	[1] 375	(2)	(2)	371	(2)	(2)	300
Denver No. 1 (State)	.....	242	.....	242	.....	[1] 1,408	.....	(2)	.....	(2)	.....	183
Denver No. 2 (State)	.....	1,512	.....	1,512	200	[1] 806	(2)	(2)	124	(2)	(2)	237
Pueblo (State)	(2)	370	390	370	408	[1] 412	(2)	(2)	366	(2)	(2)	359
Total	.....	.....	.....	.....	.....	.....	.....	.....	861	(2)	(2)	1,079
Connecticut:												
Bridgeport (State)	(2)	(2)	771	837	890	887	(2)	(2)	(2)	(2)	682	706
Hartford (State)	(2)	(2)	778	884	982	1,087	(2)	(2)	(2)	(2)	651	789
New Haven (State)	(2)	(2)	733	747	1,035	904	(2)	(2)	(2)	(2)	628	662
Norwich (State)	(2)	(2)	158	241	182	265	(2)	(2)	(2)	(2)	151	228
Waterbury (State)	(2)	(2)	126	119	162	158	(2)	(2)	(2)	(2)	84	86
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	(2)	2,196	2,471

[1] Number applying for work. [2] Not reported. [3] Includes Los Angeles district, 8 counties.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.
Illinois:												
Chicago (State)	.....	3,427	.....	12,687	.....	10,083	.....	3,300	.....	12,977	.....	10,881
East St. Louis (State)	.....	688	.....	1,058	.....	370	.....	348	.....	911	.....	884
Peoria (State)	.....	779	.....	1,609	.....	330	.....	713	.....	1,033	.....	1,022
Rockford (State)	.....	475	.....	1,075	.....	686	.....	211	.....	643	.....	598
Rock Island-Moline (State)	.....	982	.....	4,211	.....	1,680	.....	981	.....	3,567	.....	2,500
Springfield (State)	.....	492	.....	708	.....	220	.....	472	.....	638	.....	515
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	19,769	.....	16,400
Indiana:												
Evansville (State)	101	47	336	237	9	350	.....	100	590	287	267	237
Fort Wayne (State)	173	570	173	570	[1] 166	(2)	(2)	(2)	(1)	516	154	516
Indianapolis (State)	909	1,373	909	1,337	370	1,200	290	104	789	1,373	789	1,304
South Bend (State)	131	107	396	169	245	300	91	52	247	260	190	169
Terre Haute (State)	.....	115	.....	380	.....	298	.....	65	.....	363	.....	356
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,626	2,799	1,400	2,582
Iowa:												
Des Moines (Federal-State)[3]	20	95	95	406	114	240	27	62	101	299	76	189
Kansas:												
Topeka (State)	10	86	14	90	30	35	3	2	18	16	12	14
Kentucky:												
Louisville (State)	273	124	273	124	[1] 411	[1] 134	(2)	(2)	273	124	273	107
Louisville (municipal-private)	(2)	254	254	378	354	229	757	420	266	378	137	184
Total	.....	.....	.....	.....	.....	.....	.....	.....	539	502	410	291
Massachusetts:												
Boston (State)	1,430	1,154	1,649	1,398	[4] 982	[4] 963	(2)	(2)	[5] 2,499	[5] 2,219	1,117	1,072
Springfield (State)	862	682	1,187	1,007	[4] 354	[4] 321	(2)	(2)	[5] 1,256	1,150	801	700
Worcester (State)	829	788	1,127	1,110	[4] 502	[4] 516	(2)	(2)	[5] 1,242	1,169	657	618
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,997	4,538	2,575	2,390
Michigan:												
Battle Creek (State)	42	85	154	402	[1] 106	[1] 765	(2)	(2)	104	402	104	402
Bay City (State)	58	24	123	84	[1] 221	[1] 162	(2)	(2)	123	162	123	162
Detroit (State)	450	1,114	3,175	5,571	(2)	[1] 5,571	(2)	(2)	3,175	5,571	3,175	5,542
Flint (State)	748	286	748	643	[1] 748	[1] 965	(2)	(2)	748	643	748	643
Grand Rapids (State)	337	303	586	589	[1] 586	[1] 823	(2)	(2)	565	667	565	574
Jackson (State)	302	243	511	369	(2)	[1] 434	(2)	(2)	499	360	486	350
Kalamazoo (State)	243	180	243	263	[1] 243	[1] 537	(2)	(2)	243	252	243	226
Lansing (State)	25	78	81	502	[1] 104	[1] 981	(2)	(2)	66	502	65	502
Muskegon (State)	48	33	132	112	[1] 170	[1] 316	(2)	(2)	131	87	106	72
Saginaw (State)	127	93	641	400	[1] 552	[1] 548	(2)	(2)	552	400	552	400
Total	.....	.....	.....	.....	.....	.....	.....	.....	6,206	9,046	6,168	8,873
Minnesota:												
Duluth (State)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1,165	1,097
Minneapolis (State)	(2)	(2)	(2)	1,793	(2)	1,758	(2)	(2)	(2)	1,684	1,951	1,437
St. Paul (State)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1,118	566
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	1,684	4,174	3,100

[1] Number applying for work.
[2] Not reported.
[3] State office prior to October, 1917.
[4] Number who were registered.
[5] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.
Missouri:												
St. Joseph (State)	371	326	979	939	[1] 728	802	2	28	730	830	728	826
St. Louis (Federal-State) [2]	241	269	707	1,342	[1] 555	1,483	(3)	(3)	513	1,483	492	1,417
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,243	2,313	1,220	2,243
Montana:												
Butte (municipal)	373	(3)	(3)	517	[1] 485	518	(3)	(3)	(3)	(3)	283	418
New York:												
Albany (State)	413	473	565	685	415	562	285	326	734	833	424	460
Buffalo (State)	923	1,003	1,922	1,305	1,459	1,128	89	141	1,882	1,643	1,428	1,159
New York City (State)	1,381	1,690	1,895	2,614	946	1,334	507	863	2,049	2,701	1,296	1,712
New York City (municipal)	2,375	1,818	2,750	2,490	[1] 1,856	2,000	(3)	1,613	3,558	3,126	2,340	2,112
Rochester (State)	1,062	897	1,744	1,435	815	573	373	460	1,548	1,223	870	762
Syracuse (State)	789	733	1,206	1,222	672	579	96	265	1,065	1,134	745	852
Total	.....	.....	.....	.....	.....	.....	.....	.....	14,394	10,660	9,443	7,057
Ohio:												
Akron (State-municipal)	(3)	(3)	1,674	1,776	717	977	1,636	1,698	1,411	1,527	1,184	1,300
Athens, (State-municipal)	.....	(3)	.....	29	.....	38	.....	40	.....	37	.....	26
Canton (State-municipal)	.....	(3)	.....	597	.....	405	.....	245	.....	518	.....	404
Chillicothe (State-municipal)	.....	(3)	.....	631	.....	396	.....	266	.....	544	.....	473
Cincinnati (State-municipal)	(3)	(3)	1,621	2,220	1,675	1,853	2,589	3,412	1,670	2,286	1,118	1,756
Cleveland (State-municipal)	(3)	(3)	6,815	5,578	2,306	2,471	6,840	7,646	5,780	5,288	4,536	4,596
Columbus (State-municipal)	(3)	(3)	1,854	2,998	578	1,157	2,170	3,225	1,769	3,047	1,516	2,256
Dayton (State-municipal)	(3)	(3)	914	1,864	677	1,633	1,069	1,966	849	1,537	751	1,374
Hamilton (State-municipal)	.....	(3)	.....	222	.....	181	.....	68	.....	209	.....	163
Lima (State municipal)	.....	(3)	.....	402	.....	475	.....	255	.....	402	.....	339
Mansfield (State-municipal)	.....	(3)	.....	185	.....	160	.....	123	.....	165	.....	126
Marietta (State-municipal)	.....	(3)	.....	177	.....	208	.....	87	.....	205	.....	144
Marion State-municipal)	.....	(3)	.....	309	.....	277	.....	153	.....	354	.....	256
Portsmouth (State-municipal)	.....	(3)	.....	388	.....	339	.....	121	.....	377	.....	225
Sandusky (State-municipal)	.....	(3)	.....	202	.....	173	.....	73	.....	203	.....	165
Springfield (State-municipal)	.....	(3)	.....	444	.....	523	.....	485	.....	428	.....	200
Steubenville (State-municipal)	.....	(3)	.....	780	.....	360	.....	283	.....	534	.....	458
Tiffin (State-municipal)	.....	(3)	.....	220	.....	368	.....	318	.....	255	.....	200
Toledo (State-municipal)	(3)	(3)	1,990	2,736	1,286	2,174	2,354	4,542	1,804	2,706	1,486	2,385
Washington C. H. (State-municipal)	.....	(3)	.....	38	.....	43	.....	40	.....	41	.....	22
Youngstown (State-municipal)	(3)	(3)	1,005	1,412	601	873	740	1,179	968	1,335	843	1,218
Zanesville (State-municipal)	.....	(3)	.....	119	.....	219	.....	77	.....	213	.....	140
Total	.....	.....	.....	.....	.....	.....	.....	.....	14,251	22,211	11,434	18,226

[1] Number applying for work. [2] State office prior to August, 1917. [3] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, 1916 AND 1917—Concluded.

UNITED STATES—Concluded.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.	Dec., 1916.	Dec., 1917.
Oklahoma:												
Enid (State)	(1)	135	86	169	116	[2] 159	(1)	(1)	(1)	150	78	131
Muskogee (State)	(1)	338	337	439	236	[2] 513	(1)	(1)	(1)	500	211	308
Oklahoma City (State)	(1)	243	341	742	364	[2] 774	(1)	(1)	(1)	760	289	601
Tulsa (State)	(1)	735	740	1,132	707	[2] 1,110	(1)	(1)	(1)	1,056	667	1,019
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	2,466	1,245	2,059
Pennsylvania:												
Altoona (State)	(1)	83	142	235	47	90	6	29	79	108	69	101
Erie (State)	.....	173	.....	948	.....	238	.....	56	.....	281	.....	243
Harrisburg (State)	(1)	146	254	1,368	238	352	79	88	198	414	169	378
Johnstown (State)	(1)	87	214	145	71	86	24	12	81	90	70	80
Philadelphia (State)	(1)	441	881	6,302	600	6,726	539	(1)	958	6,489	774	6,362
Pittsburg (State)	(1)	(1)	1,052	2,570	513	1,878	206	235	542	1,953	508	1,906
Scranton (State)	.....	84	.....	939	.....	130	.....	1	.....	54	.....	53
Williamsport (State)	.....	24	.....	3,510	.....	70	.....	33	.....	113	.....	110
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,858	9,502	1,590	9,233
Rhode Island:												
Providence (State)	120	134	129	220	51	118	34	81	(1)	220	129	220
Texas:												
Dallas (municipal)	155	193	290	(1)	85	98	11	(1)	305	356	268	289
Virginia:												
Richmond (municipal)	223	190	335	264	241	273	(1)	(1)	403	343	192	176
Washington:												
Bellingham (Federal-municipal)	74	87	150	167	[2] 205	[2] 296	(1)	(1)	127	153	104	141
Everett (municipal)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	360	267	197
Seattle (municipal)	2,253	3,252	3,324	6,140	(1)	(1)	(1)	(1)	3,295	6,092	3,010	5,724
Spokane (municipal)	1,610	1,450	1,875	1,390	106	38	.....	(1)	1,856	1,384	1,856	1,372
Total	.....	.....	.....	.....	.....	.....	.....	.....	5,278	7,989	5,237	7,434
Wisconsin:												
La Crosse (State-municipal)	87	81	125	106	[2] 204	[2] 173	(1)	(1)	84	91	74	48
Milwaukee (Federal-State-county-municipal)[3]	1,300	1,186	2,968	3,202	[2] 2,829	[2] 3,061	(1)	(1)	2,913	3,084	2,211	2,053
Oshkosh (State-municipal)	109	82	127	90	[2] 191	[2] 32	(1)	(1)	103	76	80	66
Superior (State-municipal)	249	217	928	788	[2] 546	(1)	(1)	(1)	542	880	438	733
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,642	4,131	2,803	2,900
Grand total	.....	.....	.....	.....	.....	.....	.....	.....	58,773	105,806	53,165	93,149

CANADA.

Quebec:												
Montreal (provincial)	182	103	394	219	[2] 348	151	(1)	(1)	339	198	266	163
Quebec (provincial)	(1)	21	44	138	[2] 74	[2] 110	(1)	(1)	(1)	91	28	84
Total	.....	.....	.....	.....	.....	.....	.....	.....	339	289	294	247

[1] Not reported. [2] Number applying for work. [3] Not cooperative with county-municipal in 1916.

REPORT OF EMPLOYMENT EXCHANGES IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) FOR FOUR WEEKS ENDING NOVEMBER 9, 1917.

As reported by the British Labor Gazette of December, 1917, the total number of work people remaining on the registers of the 383 British employment offices on November 9, 1917, was 110,129, compared with 107,736 on October 12, 1917, and with 114,513 on November 10, 1916. These figures comprise workers in professional, commercial, and clerical, as well as industrial occupations.

The operations of the employment exchanges for the four weeks are summarized as follows:

Item.	Men.	Women.	Boys.	Girls.	Total.
On registers Oct. 12, 1917	28,519	63,883	7,024	8,310	107,736
Number of individuals registered during period	93,073	132,671	21,982	19,727	267,453
Total	121,592	196,554	29,006	28,037	375,189
Reregistrations during period	3,567	3,800	448	355	8,170
On registers Nov. 9, 1917	30,689	63,267	7,626	8,547	110,129
Vacancies notified during period	85,480	63,985	12,646	11,025	173,136
Vacancies filled during period	54,879	54,890	10,421	8,473	128,663
Applicants placed in other districts	15,225	11,081	1,514	1,105	28,925

The average daily number of registrations and of vacancies filled for the four weeks ending November 9, 1917, is shown in the following table, together with comparative figures for October 12, 1917, and November 10, 1916:

Department.	Average registrations per day in period ending—			Average vacancies filled per day in period ending—		
	Nov. 9, 1917.	Oct. 12, 1917.	Nov. 10, 1916.	Nov. 9, 1917.	Oct. 12, 1917.	Nov. 10, 1916.
Men	4,027	3,432	3,686	2,287	1,929	2,040
Women	5,686	5,586	6,416	2,287	2,080	2,500
Boys	935	870	772	434	396	392
Girls	837	826	852	353	341	364
Total	11,485	10,714	11,726	5,361	4,746	5,296

EMPLOYMENT IN SELECTED INDUSTRIES IN DECEMBER, 1917.

The Bureau of Labor Statistics has received and tabulated reports concerning the volume of employment in December, 1917, from representative manufacturing establishments in 13 industries. Comparing the figures for December, 1917, with those from identical establishments for December, 1916, it appears that in 5 industries there was an increase in the number of people employed and in 8 a decrease. Men's ready-made clothing shows an increase of 15.9 per cent while silk shows a decrease of 9.1 per cent.

Each of the 13 industries shows an increase in the total amount of the pay roll for December, 1917, as compared with December, 1916. The greatest increase shown—38.4 per cent—is in men's ready-made clothing. Woolen and iron and steel show increases of 37.9 and 35.5 per cent, respectively.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER, 1916, AND DECEMBER, 1917.

Industry.	Establishments reporting for December both years.	Period of pay roll.	Number on pay roll in December—		Per cent of increase (+) or decrease (−).	Amount of pay roll in December—		Per cent of increase (+) or decrease (−).
			1916	1917		1916	1917	
Boots and shoes	67	1 week	57,192	52,674	− 7.9	$823,722	$846,648	+ 2.8
Cotton manufacturing	43	...do	37,165	36,814	− .9	378,077	472,037	+24.9
Cotton finishing	17	...do	13,056	12,875	− 1.4	179,326	211,142	+17.7
Hosiery and underwear	58	...do	30,994	31,062	+ .2	325,999	380,354	+16.7
Woolen	45	...do	37,059	40,599	+ 9.6	506,291	698,394	+37.9
Silk	34	2 weeks	10,682	9,710	− 9.1	227,784	231,232	+ 1.5
Men's ready-made clothing	33	1 week	15,997	18,540	+15.9	226,362	313,216	+38.4
Iron and steel	104	½ month	170,431	179,702	+ 5.4	6,993,674	9,477,527	+35.5
Car building and repairing	17	...do	25,482	24,859	− 2.4	904,414	995,038	+10.0
Cigar manufacturing	57	1 week	19,451	20,988	+ 7.9	231,335	270,125	+16.8
Automobile manufacturing	47	...do	104,638	101,415	− 3.1	2,165,965	2,496,948	+15.3
Leather manufacturing	34	...do	12,264	12,057	− 1.7	182,950	223,439	+22.1
Paper making	47	...do	25,506	25,485	− .1	373,752	434,153	+16.2

The table below shows the number of persons actually working on the last full day of the reported pay period in December, 1916, and December, 1917. The number of establishments reporting on this question is small and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN DECEMBER, 1916, AND DECEMBER, 1917.

Industry.	Establishments reporting for December, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in December—		Per cent of increase (+) or decrease (−).
			1916	1917	
Boots and shoes	16	1 week	6,967	6,282	− 9.8
Cotton manufacturing	29	...do	24,079	23,391	− 2.9
Cotton finishing	14	...do	11,101	11,144	+ .4
Hosiery and underwear	14	...do	11,853	11,882	+ .2
Woolen	37	...do	33,257	36,603	+10.1
Silk	19	2 weeks	7,116	6,462	− 9.2
Men's ready-made clothing	4	1 week	3,367	3,579	+ 6.3
Iron and steel	81	½ month	128,104	134,399	+ 4.9
Car building and repairing	15	...do	21,251	20,627	− 2.9
Cigar manufacturing	12	1 week	3,550	3,561	+ .3
Automobile manufacturing	24	...do	74,633	69,063	− 7.5
Leather manufacturing	16	...do	6,319	6,533	+ 3.4
Paper making	13	...do	8,866	8,848	− .2

The figures in the table below show that in 11 of the 13 industries there were more persons on the pay roll in December, 1917, than in November, 1917. Car building and repairing shows the largest increase—4.9 per cent—while silk and automobile manufacturing show decreases of 0.9 and 0.5 per cent, respectively.

Of the 13 industries reporting, 8 show increases and 5 decreases in the total amount of pay roll when comparing December, 1917, with November, 1917. Boots and shoes and leather manufacturing show increases of 18.1 per cent and 9.8 per cent, respectively. The greatest decrease indicated—5.2 per cent—is shown in automobile manufacturing, while iron and steel shows a decrease of 3.4 per cent, which decrease is doubtless explained by a shortage of fuel experienced by many plants during the pay-roll period under consideration.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER, 1917, AND DECEMBER, 1917.

Industry.	Establishments reporting for November and December.	Period of pay roll.	Number on pay roll in 1917.		Per cent of increase (+) or decrease (−).	Amount of pay roll in 1917.		Per cent of increase (+) or decrease (−).
			November.	December.		November.	December.	
Boots and shoes	66	1 week	52,430	52,465	+0.1	791,671	934,760	+18.1
Cotton manufacturing	52	...do	41,912	42,259	+ .8	510,399	534,012	+ 4.6
Cotton finishing	17	...do	12,610	12,875	+2.1	202,926	211,142	+ 4.0
Hosiery and underwear	51	...do	29,094	29,693	+2.1	357,353	367,880	+ 2.9
Woolen	45	...do	39,912	40,559	+1.6	674,184	701,032	+ 4.0
Silk	34	2 weeks	11,605	11,506	− .9	284,476	284,155	− .1
Men's ready-made clothing	34	1 week	18,163	18,595	+2.4	297,063	314,023	+ 5.7
Iron and steel	104	½ month	190,995	190,445	− .3	10,445,567	10,095,628	− 3.4
Car building and repairing	16	...do	23,464	24,608	+4.9	960,237	983,848	+ 2.5
Cigar manufacturing	57	1 week	20,978	21,081	+ .5	269,830	268,939	− .3
Automobile manufacturing	42	...do	97,216	96,682	− .5	2,497,902	2,367,631	− 5.2
Leather manufacturing	32	...do	11,526	11,806	+2.4	200,659	220,326	+ 9.8
Paper making	47	...do	23,555	24,133	+2.5	410,757	409,263	− .4

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for November and December, 1917. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN NOVEMBER, 1917, AND DECEMBER, 1917.

Industry.	Establishments reporting for November and December.	Period of pay roll.	Number actually working on last full day of reported pay period in 1917—		Per cent of increase (+) or decrease (−).
			November.	December.	
Boots and shoes	22	1 week	10,020	10,603	+5.8
Cotton manufacturing	36	...do	27,414	27,660	+ .9
Cotton finishing	14	...do	10,869	11,144	+2.5
Hosiery and underwear	14	...do	11,767	12,153	+3.3
Woolen	38	...do	36,149	36,675	+1.5
Silk	20	2 weeks	7,863	7,931	+ .9
Men's ready-made clothing	4	1 week	3,430	3,579	+4.3
Iron and steel	82	½ month	146,922	143,399	−2.4
Car building and repairing	16	...do	21,234	22,080	+4.0
Cigar manufacturing	18	1 week	4,786	4,570	−4.5
Automobile manufacturing	24	...do	69,447	68,245	−1.7
Leather manufacturing	14	...do	6,139	6,338	+3.2
Paper making	13	...do	8,587	8,848	+3.0

CHANGES IN WAGE RATES.

In 8 of the 13 industries there were establishments reporting increases in wage rates during the period November 15 to December 15, 1917, and in 5 industries no establishment reported a change. A number of firms did not answer the inquiry relating to the wage-rate changes, but in such cases it is probably safe to assume that no changes were made.

Cotton manufacturing: Reports from 14 plants show increases in the wage rates. One plant reports an increase of 12½ per cent to the entire force. One plant reports a 12 per cent increase to all employees except the office force. Eight plants report an increase of 10 per cent to all employees; while another plant reports an increase of 10 per cent to 96.5 per cent of its force. One plant reports an 8 per cent increase to all the force; and one plant, a 5 per cent increase to all its employees.

Paper making: Reports from three plants show changes in the wage rates. One plant reports a 10 per cent increase to 60 per cent of its force; one, 5 per cent increase to its entire force; and a third, 75 cents per day increase to all its employees.

Car building and repairing: Two plants show changes in the wage rates. One plant reports an increase to all of the employees, but does not make a definite statement as to the amount of increase; and the second plant reports a 10 per cent increase to 8 per cent of the force.

Men's ready-made clothing: One establishment reports an increase of 10 per cent to 40 per cent of its employees; and another, an increase to all cutters, but makes no statement as to the per cent of increase.

Hosiery and underwear: One plant reports an increase of 15 per cent to all of its employees; while a second reports bonuses of from 5 to 10 per cent to the entire force.

Automobile manufacturing: One plant reports a 10 per cent increase to 8 per cent of its force.

Boots and shoes: One plant reports a 10 per cent increase in some departments.

Iron and steel: One plant reports an increase of 10 per cent to time workers.

INDEX NUMBERS OF EMPLOYMENT AND OF PAY ROLL, JANUARY, 1915, TO DECEMBER, 1917.

Index numbers showing relatively the variation in the number of persons employed and in pay-roll totals in seven industries by months from January, 1915, to December, 1917, have been compiled and are presented in the following table. These index numbers are based on the figures for "Employment in selected industries," appearing in this and preceding REVIEWS. The seven industries shown are the only ones for which the Bureau of Labor Statistics has comparable data as far back as January, 1915.

January, 1915, is taken as the starting point, and the number of persons whose names appeared on the pay roll for that month represents 100. The amount of money carried on the pay rolls is treated in the same manner. To illustrate, if the number of persons employed in the iron and steel industry in January, 1915, is taken as 100, then the number employed in that industry in December, 1917, was 183; in other words, had increased 83 per cent; and, if the money pay roll in January, 1915, be taken as 100, the pay roll in December, 1917, represented 335, or in other words, the amount paid in wages was more than 3⅓ times as much as in January, 1915.

While the index numbers show the change in the number of persons employed and in the aggregate amount of money paid in wages, they do not, without a computation, indicate the change in per capita earnings. Such increase may be obtained by dividing the index for the amount of the pay roll by the index for the number of persons on the pay roll. The per cent of such increase in December, 1917, as compared with January, 1915, has been computed and entered at the bottom of the table. Thus the per capita earnings of boot and shoe factory employees increased 76 per cent; of cotton manufacturing employees, 63 per cent, etc.

INDEX NUMBERS OF EMPLOYMENT AND OF PAY ROLL, JANUARY, 1915, TO DECEMBER, 1917.

[January, 1915=100.]

Month and year.	Boots and shoes.		Cotton manufacturing.		Cotton finishing.		Woolen manufacturing.		Hosiery and underwear.		Silk.		Iron and steel.	
	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.
1915.														
January	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February	99	96	100	104	111	112	101	99	105	106	102	108	96	106
March	95	88	101	107	108	110	104	104	105	111	102	110	104	116
April	89	76	101	105	110	113	107	108	108	112	99	102	108	122
May	91	82	102	106	110	115	107	107	110	118	99	105	111	120
June	92	89	101	101	102	107	102	97	112	122	98	102	115	132
July	93	91	101	101	109	105	105	98	110	118	97	103	117	121
August	94	95	100	102	106	109	103	96	108	118	100	104	121	135
September	94	95	99	103	106	107	113	111	113	117	101	104	125	140
October	103	111	100	96	111	114	113	102	114	129	103	113	130	147
November	107	120	101	101	122	116	117	117	116	132	106	121	131	159
December	125	129	101	100	115	124	117	121	119	138	108	121	130	164
1916.														
January	114	125	99	102	118	124	114	124	115	132	109	120	135	162
February	115	123	100	110	119	129	117	133	116	138	107	126	138	184
March	115	125	100	111	121	132	117	134	118	142	109	131	141	186
April	113	120	100	113	115	127	119	136	120	142	110	130	141	186
May	111	123	100	118	112	136	120	145	121	146	109	130	146	204
June	113	127	100	117	113	137	117	139	120	144	110	133	147	207
July	114	125	100	114	113	133	116	136	119	135	110	120	149	181
August	113	123	98	114	114	132	111	129	117	134	109	124	152	203
September	112	122	98	116	113	134	115	138	119	142	109	125	155	211
October	112	123	98	111	113	136	117	134	121	147	109	131	155	219
November	117	141	99	117	116	141	117	144	123	156	107	129	158	224
December	122	156	101	125	119	156	119	158	124	164	109	135	160	234
1917.														
January	123	157	100	123	117	152	122	163	123	160	109	134	164	216
February	123	159	100	125	116	151	122	161	124	158	108	137	165	212
March	122	156	100	127	116	154	123	162	125	164	107	142	168	257
April	119	145	99	124	113	150	120	154	122	154	106	138	167	241
May	118	152	99	129	115	163	120	173	124	166	104	141	172	286
June	120	165	99	137	116	166	119	172	123	169	102	136	173	286
July	117	153	99	137	111	153	119	173	121	166	102	128	175	267
August	110	153	97	131	111	152	116	168	119	161	100	128	180	296
September	105	150	97	135	113	155	119	176	120	165	98	128	179	290
October	107	151	97	137	112	158	122	192	121	176	96	134	182	343
November	115	171	99	156	116	174	126	208	122	190	97	134	183	347
December	115	202	100	163	118	180	128	216	124	195	96	134	183	335
Per cent of increase in per capita earnings in December, 1917, over January, 1915		76		63		53		69		57		40		83

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN NOVEMBER, 1917.

The table below pertaining to the condition of employment in Great Britain and Ireland was compiled from a report published in the British Labor Gazette of December, 1917.

No material changes relating to the number of employees in November, 1917, as compared with October, 1917, are shown except for seamen which show a decrease of 8.9 per cent in the number of men. The carpet trade shows an increase of 2.4 per cent, but no other trade shows a change of more than 2 per cent.

In comparing November, 1917, with November, 1916, as to numbers employed, more important changes are seen. Dock and riverside labor shows a decrease of 25.7 per cent; seamen a decrease of 21 per cent; food preparation a decrease of 14.5 per cent; while dressmaking and millinery, quarrying, tin plate, steel and galvanized sheet, cotton, and corset trades, show a decline of from 10 to 12.1 per cent each. Iron and steel and tailoring trades show the greatest increases—6.8 per cent and 5.1 per cent, respectively.

In November as compared with October but two trades show a decrease in earnings, namely: Cotton, 0.1 per cent; and bleaching, printing, dyeing, and finishing, 1.2 per cent. The jute trade shows an increase of 10.7 per cent; bookbinding, 8.2 per cent; printing, 6.9 per cent; while the other trades show increases ranging below these figures.

Comparing November, 1917, with November, 1916, on the question of earnings of employees important changes are shown, all of which are increases, except in the cotton trade which shows no change. The tailoring trades show an increase of 40.5 per cent; linen, an increase of 38.4; brick, an increase of 30.1 per cent; jute, an increase of 23.5 per cent; and worsted, an increase of 20.7 per cent. Ten trades show increases ranging from 10.3 per cent to 19.6 per cent, while the other trades reporting increases of earnings of employees show changes of less than 10 per cent.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN NOVEMBER, 1917, AS COMPARED WITH OCTOBER, 1917, AND NOVEMBER, 1916.

[Compiled from figures in the Labor Gazette (London), December, 1917.]

Industries, and basis of comparison.	Per cent of increase (+) or decrease (−) in November, 1917, as compared with—	
	October, 1917.	November, 1916.
Coal mining: Average number of days worked	(1)	− 2.2
Iron mining: Average number of days worked	+ 1.5	+ 2.9
Quarrying: Number of employees	+ .5	−10.6
Pig iron: Number of furnaces in blast	+ 1.0	+ 3.5
Iron and steel works:		
Number of employees	+ .4	+ 6.8
Number of shifts worked	+ .4	+ 7.0
Engineering trades: Number of employees [2]	− .06	− .31
Shipbuilding trades: Number of employees [2]	+ .08	− .02
Tinplate, steel, and galvanized sheet trades: Number of mills in operation	(1)	−12.1
Cotton trade:		
Number of employees	− .5	−11.4
Earnings of employees	− .1	(1)
Woolen trade:		
Number of employees	+ .1	− 3.9
Earnings of employees	+ 4.9	+16.3
Worsted trade:		
Number of employees	(1)	− 1.4
Earnings of employees	+ 4.9	+20.7
Hosiery trade:		
Number of employees	− .2	− 4.3
Earnings of employees	+ 2.5	+14.2
Jute trade:		
Number of employees	+ .4	+ 1.1
Earnings of employees	+10.7	+23.5
Linen trade:		
Number of employees	+ 1.6	+ 4.7
Earnings of employees	+ 5.0	+38.4
Silk trade:		
Number of employees	+ .1	− 1.9
Earnings of employees	+ 2.1	+19.6
Carpet trade:		
Number of employees	+ 2.4	+ 2.6
Earnings of employees	+ 2.2	+18.8
Lace trade:		
Number of employees	+ .2	− 5.7
Earnings of employees	+ 1.6	+ 6.8
Bleaching, printing, dyeing, and finishing:		
Number of employees	− .6	− 3.4
Earnings of employees	− 1.2	+13.6
Boot and shoe trade:		
Number of employees	− .5	− 6.0
Earnings of employees	+ .4	+ 7.7
Leather trades: Number of employees	+ .3	+ 2.1
Tailoring trades:		
Number of employees	+ 2.0	+ 5.1
Earnings of employees	+ 4.3	+40.5
Shirt and collar trade:		
Number of employees	− .2	− 8.3
Earnings of employees	+1.5	+10.3
Other clothing trades:		
Dressmaking and millinery—Number of employees	− .8	−12.1
Wholesale mantle, costume, blouse, etc.—		
Number of employees—London	+ .8	+ .7
Number of employees—Manchester	− .7	− 2.4
Number of employees—Glasgow	−1.0	− 2.8
Corset trade—Number of employees	− .5	−10.8
Building and construction of works: Number of employees [2]	− .04	+ .17
Sawmilling and machining: Number of employees [2]	+ .1	− .2
Brick trade:		
Number of employees	+1.3	+ 1.2
Earnings of employees	+5.2	+30.1
Cement trade:		
Number of employees	− .1	− 9.4
Earnings of employees	+3.0	+11.6
Printing, bookbinding, and paper trades:		
Printing trades—		
Number of employees reported by trade-unions [2]	+ .2	+ .2
Number of employees reported by employers	+ .9	− 8.4
Earnings of employees reported by employers	+6.9	+ 6.1
Bookbinding trade—		
Number of employees reported by trade-unions [2]	+ .3	+ .1
Number of employees reported by employers	+ .2	− 5.4
Earnings of employees reported by employers	+8.2	+17.4
Paper trades—Number of employees	− .2	− 1.7
Pottery trades:		
Number of employees	−1.0	− 2.0
Earnings of employees	+1.1	+19.6
Glass trades:		
Number of employees	+1.9	+ .2
Earnings of employees	+6.0	+13.2
Food preparation trades:		
Number of employees	+ .3	−14.5
Earnings of employees	+4.6	+ 7.1
Dock and riverside labor: Number of employees	+2.0	−25.7
Seamen: Number of employees	−8.9	−21.0

[1] No change.

[2] Based on unemployment returns.

The table following shows, by occupation groups, the number of individuals registered, the vacancies notified and the vacancies filled, indicating the extent of unemployment in Great Britain during the four weeks ending November 9, 1917. The totals for this period are also compared with the totals for the five weeks ending October 12, 1917:

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE 4 WEEKS ENDED NOV. 9, 1917.

A.—Insured trades.

Occupation group.	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Building:										
Carpenters, joiners, etc.	3,157	291	4,602	85	2,537	91	52	2	45	2
Bricklayers	1,497	.....	3,189	.....	1,201	.....	6	.....	3	.....
Masons	321	2	92	.....	40	1	1	2	1	.....
Plasterers	529	1	209	.....	161	.....	4	.....	4	.....
Painters, decorators, etc.	2,558	293	1,485	313	1,192	296	24	9	16	9
Plumbers, glaziers	716	5	812	.....	310	.....	38	.....	26	1
Other skilled occupations	75	.....	95	1	15	.....	.....	.....	.....	.....
Laborers	5,992	148	7,269	199	4,163	191	148	.....	124	.....
Works of construction	6,358	63	10,689	95	6,595	112	11	7	11	5
Sawmilling	1,081	1,371	815	795	483	793	227	87	198	82
Shipbuilding:										
Platers, riveters	1,381	17	1,331	5	893	7	69	.....	40	.....
Shipwrights	374	1	456	3	327	3	9	.....	10	.....
Laborers	1,998	311	1,693	108	1,283	110	141	4	120	4
Engineering:										
Molders	927	166	861	99	511	79	62	31	48	15
Smiths	666	85	592	105	355	86	13	1	7	.....
Erectors, fitters, turners	8,545	1,828	7,966	1,025	6.086	884	756	32	706	30
Metal machinists	2,822	6,906	1,876	7,119	1,416	6,818	641	292	604	278
Wiremen	610	81	719	73	368	89	58	15	50	8
Other skilled occupations	2,999	4,885	2,714	2,912	1,545	3,002	266	116	240	132
Laborers	9,459	2,183	7,838	2,036	7,029	1,965	481	72	423	60
Construction of vehicles	933	297	415	155	345	208	72	20	61	20
Cabinetmaking, etc.	265	116	368	30	78	17	19	17	18	9
Miscellaneous metal trades	1,995	2,053	2,052	994	1,572	981	380	404	271	290
Precious metals, etc.	136	238	129	198	48	181	35	77	26	57
Bricks and cement	84	66	288	63	73	48	12	3	10	3
Chemicals, etc.	687	730	1,169	827	929	829	197	97	164	80
Rubber and waterproof goods	177	805	292	687	146	561	39	81	35	49
Ammunition and explosives	3,475	31,255	2,343	12,365	2,297	11,437	353	510	359	460
Leather—Boots and shoes	204	265	193	162	99	106	49	54	35	41
Leather—Excluding boots and shoes	207	607	131	232	61	190	34	83	30	80
Total	60,228	55,069	62,683	30,686	42,158	29,085	4,197	2,016	3,685	1,715
Total, males and females.	115,297		93,369		71,243		6,213		5,400	
5 weeks ending Oct. 12, 1917	129,542		100,066		76,589		7.726		6,526	

INDIVIDUALS REGISTERED, VACANCIES FILLED AND VACANCIES NOTIFIED IN THE 4 WEEKS ENDED NOV. 9, 1917—Concluded.

B.—Uninsured trades.

Occupation group.	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Mining and quarrying	468	22	3,070	12	230	14	58	2	28	.....
Textile:										
Cotton	400	865	375	766	185	470	137	115	79	72
Wool and worsted	163	305	180	141	107	124	55	60	45	49
Silk, flax, linen, etc	215	1,444	355	628	145	505	127	323	109	249
Dress:										
Tailors and tailoresses	148	640	97	743	20	451	37	164	26	109
Dressmakers and milliners	.....	575	.....	198	.....	151	.....	213	.....	151
Seamstresses	.....	1,006	.....	552	.....	443	.....	192	.....	158
Others	80	1,329	49	661	9	600	36	104	24	101
Conveyance of men, goods, etc.:										
On railways	181	305	505	241	269	229	118	3	90	2
On roads, seas, rivers, etc	9,378	2,949	6,577	1,093	4,694	870	2,556	1,178	1,813	828
Agriculture	654	1,260	820	1,715	247	1,459	462	253	430	248
Paper, prints, books, and stationery	189	671	295	590	102	461	211	530	165	415
Wood, furniture, fittings, etc	28	88	49	44	10	43	121	50	112	46
Pottery and glass	84	250	206	146	73	95	100	76	79	35
Food, tobacco, drink and lodging:										
Bread and biscuit, etc., makers	126	270	115	231	27	209	44	98	32	85
Waiters	123	1,042	50	868	29	744	17	39	12	32
Others (jam, cocoa, and tobacco)	117	621	313	672	111	587	81	333	77	287
Brushes, brooms, etc	12	37	17	14	8	16	17	55	17	54
Gas, water, electrical supply, and sanitary service	106	44	1,098	118	411	89	17	.....	13	.....
Commercial and clerical	3,459	10,002	1,582	3,759	974	3,176	854	1,290	646	1,089
Domestic:										
Laundry and washing service	1,492	1,020	1,194	1,110	594	895	406	77	292	50
Private indoor servants		1,861		2,324		669		303		113
Other indoor servants		8,236		6,003		4,680		337		207
Charwomen, day girls, day servants		12,229		7,153		5,830		1,178		657
Others		364		210		157		26		20
General laborers	12,235	10,215	4,042	1,120	3,381	997	578	438	482	379
Shop assistants	434	3,509	214	628	68	408	146	600	91	459
Government, defense, and provisional	1,284	5,953	873	1,288	557	1,202	173	262	137	246
All others	1,469	9,590	721	271	470	231	2,098	710	1,937	617
Total	32,845	77,602	22,797	33,299	12,721	25,805	8,449	9,009	6,736	6,758
Total, males and females	110,447		56,096		38,526		17,458		13,494	
5 weeks ending Oct. 12, 1917	132,165		62,373		43,667		20,822		15,602	
Casual employment (men only)	57		.....		1,484		.....		.....	

This table shows that, during the period considered, in the insured trades, 115,297 adults registered for work—60,228 men and 55,069 women. There were 99,582 vacancies reported—62,683 men, 30,686 women, 4,197 boys, and 2,016 girls. The number of positions filled was 76,643—42,158 men, 29,085 women, 3,685 boys, and 1,715 girls.

The occupation groups in which the largest number of positions were filled by adults were: Ammunition and explosives, 13,734; laborers—engineering, 8,994; metal machinists, 8,234; erectors, fitters, and turners, 6,970; works of construction, 6,707; other skilled occupations—engineering, 4,547; and laborers—building, 4,354.

In the uninsured trades there were 110,447 registrations—32,845 men and 77,602 women. The number of vacancies reported was 73,554—22,797 men, 33,299 women, 8,449 boys, and 9,009 girls. The total number of positions filled was 52,020—12,721 men, 25,805 women, 6,736 boys, and 6,758 girls. The occupation groups in the uninsured trades, in which the largest number of positions were filled by adults were: Domestic service, 12,825; conveyance of men, goods, etc., 6,062; general laborers, 4,378; commercial and clerical, 4,150.

The total number of positions filled by adults in both the insured and uninsured trades during the 4 weeks ending November 9, 1917, as compared with the preceding 5 weeks, shows a decrease of 8.7 per cent. The decrease in the number of positions filled by men was 5.2 per cent; by women, 12 per cent. Much the largest number of women were employed in the manufacture of ammunition and explosives and in domestic service.

No comparison can be made between the number of registrations in the employment exchanges of Great Britain and the number of applications for work reported by the employment offices of the United States, owing to the differences in method of registering applicants. It is possible, however, to make a comparison of positions filled by the offices in the two countries. The figures show the following results:

	Number of offices.	Positions filled.		
		Total.	Average per day.	Average per day, each office.
Great Britain	383	128,663	5,361	14.0
United States	145	122,610	4,715	32.5

The above figures are significant in view of the fact that a very large percentage, if not practically all, of the employment office work of Great Britain is done through the free employment exchanges, while in the United States but a very small proportion of the placements is made through the public employment offices, the much greater proportion being handled by the private employment agencies.

EMPLOYMENT MANAGERS' CONFERENCE AT PHILADELPHIA.

Bulletin 227, recently issued by this bureau, contains the proceedings of the Third Conference of Employment Managers, which was held at Philadelphia, April 2 and 3, 1917. This conference was attended by about 500 representatives of employment managers' associations located in Boston, Chicago, Cleveland, Detroit, Newark, New York, Philadelphia, Pittsburgh, Rochester, and San Francisco, though the membership of the associations is not confined to firms in the cities named; the Boston association, for example, includes the most important industrial centers in New England. About 1,000 industrial companies are enrolled as members of the 10 associations.

The organization of these associations was the result of the recognition by employers that a changed policy must be adopted toward their employees; that the greatest waste in all industries is the waste of labor due to bad systems or no systems of handling employees, resulting in irregular work, too little work, too much work, no work, unsuitable work, no training for work, training for no work, and bad conditions of work; and that employment managers should have opportunity for exchange of ideas in order that the best methods of handling the labor force may be adopted, thus bringing about a reduction in the cost to the employer of a high labor turnover. The first employment managers' conference was held at Minneapolis in January, 1916; the second at Boston in May, 1916.

It is believed that the output of labor per man could be greatly increased—perhaps as much as 60 per cent—by a rational system of management which would give due regard to the worker's health and safety. A proper system of labor management would provide for workers ample time and facilities for rest and healthful recreation. Wages must be sufficient to provide the workers with needed food, clothing, shelter, and fuel to maintain health and strength at the maximum. Economy of consumption, that is, the art of spending the dollar wisely, is even more important than economy of production, the art of earning the dollar. Employers, working as citizens, can do much to develop and improve in their workers the art of getting 100 cents' worth of utility for every dollar paid in wages.

All this has nothing whatever to do with speeding up machinery, cutting down piece rates, working longer hours, and the like stock methods of trying to increase output per man per day and per dollar of wages. It has rather to do with shortening the working day, providing rest periods at convenient intervals, advancing piece and time rates, cutting out all overtime, re-creating in the employee an interest in the job he is doing, and helping him to get the most out of his earnings and his leisure.

The addresses and discussions contained in this report show that the employers and employment managers in attendance at the Philadelphia conference realized the importance of the employment problem and manifested real industrial statesmanship in attacking it. The matter of labor turnover—the proportion of the number of employees engaged in a year to the total number of employees on the pay roll—was given particular attention, since this is one of the greatest problems with which employment managers have to contend. Among the practical plans mentioned for reducing labor turnover were proper selection of employees, payment of adequate wages, provision of steady work, promotion of physical efficiency, fostering of good habits, hearing of complaints, and provision for the future of workers by pensions, profit sharing, etc. The question of selection of employees and termination of employment formed the basis of discussion during an entire session, and the matter of following up after hiring, including service work, employees' benefit associations, and mutual aid associations, was discussed at length by a number of speakers.

A feature of the conference was the adoption of a resolution providing for a national committee of employment executives with one representative from each employment managers' association. This committee was subsequently appointed and at a meeting held in May decided that its purpose should be to bring about a closer cooperation between organizations devoted to the study of employment problems, to arrange for national conferences, and to assist in the interchange of reports of meetings, investigations, and information of interest to local associations. It was decided not to form a national association as yet, although if the movement continues to grow such a step will probably be taken in the near future.

LABOR ORGANIZATIONS.

GERMAN FREE TRADE-UNION COUNCILS IN 1916.[1]

The statistics of the German Free Trade-Union Councils (*Gewerkschaftskartelle*) for the year 1916 show even more than those for the preceding year the unfavorable influence of the protracted state of war upon the trade-union movement. Of the 641 trade-union councils carried on the lists of the Central Federation (*Generalkommission*), to which questionnaires were transmitted by the latter, only 469, or 55 less than in the preceding year, participate in the statistics for 1916. In many instances local unions affiliated with trade councils failed to report to the councils their membership so that the membership returns of a considerable number of councils are incomplete.

The trade councils have suffered to greater extent from the war than the local unions. The latter, even if they have lost members and officers during the war, have always found strong support in their federations (*Zentralverbander*), while the former, as local organizations of the trade-unions, are more loose creations, and their activities become paralyzed whenever there is a lack in the locality of leaders able to maintain the combine of the local unions even in the face of greatly reduced membership. The annual report, however, points out that the nonparticipation of a number of councils in the statistics does not mean that these councils have been dissolved or have discontinued all their activities. Failure to transmit a report was in most instances due to the lack and continuous change of officers. In some instances, to be sure, the activities of councils have been temporarily discontinued, but the combine of the local unions is nevertheless being maintained. For all these reasons the number and membership of trade-union councils can not be determined correctly for the present and only after the termination of the war will it be possible to ascertain the actual extent of their decrease.

It should be noted here that the present statistics do not include all trade-union councils existing in Germany but only those of the free trade-unions. The Hirsch-Duncker trade societies and the Christian trade-unions have not published trade-union council statistics since 1913, nor are they expected to do so in the near future.

The 469 trade-union councils included in the statistics for 1916 had affiliated with them 5,846 trade-unions with a total membership of 837,492. At the close of the second quarter of 1914, i. e., shortly be-

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands. Statistische Beilage No. 2. Berlin, Sept. 1, 1917.

fore the outbreak of the war, the same councils had a membership of 2,090,637. A comparison of the figures for these two years shows that the membership has decreased 60 per cent. Of the above 837,492 members, 4,189 belong to the independent South German Railroad Employees' Federation and 833,303 to national federations affiliated with the general commission. According to the statistics of the general commission the federations affiliated with it (inclusive of the domestic servants' and agricultural workers' federations) had a total membership of 944,575 at the end of 1916. In the statistics of trade-union councils 88.2 per cent of this membership were therefore included, as against 88.4 per cent in 1915 and 91.4 per cent in 1913. For the proper understanding of these percentages it should be remarked that not all the members of national federations are affiliated with trade-union councils.

Of the trade-union members affiliated with councils, 235,604 belonged to the metal workers' federation, 73,120 to the factory workers' federation, 60,529 to the building trades' federation, 60,321 to the woodworkers' federation, and 57,617 to the transportation workers' federation. These five federations furnished over one-half of the total membership of all councils. The following trade-union councils had, in 1913, a membership in excess of 25,000, and in 1916 the membership shown below, with the membership for 1913 shown within parentheses: Berlin, 138,901 (302,052); Hamburg, 47,522 (143,338); Dresden, 46,161 (95,629); Leipzig, 32,059 (76,185); Munich, 30,036 (63,594); Nuremberg, 21,296 (55,723); Frankfort-on-the-Main, 12,914 (43,807); Stuttgart, 16,333 (43,483); Chemnitz, 15,751 (42,403); Bremen, 12,617 (37,311); Hanover, 13,932 (37,311); Breslau, 1,274 (31,732); Cologne, 3,865[1] (31,176); and Magdeburg, 15,025, (30,766).

The importance of the councils for the trade-union movement is of a strictly local character. Their principal task consists in the promotion of the expansion and in the strengthening of the local unions. During the war, however, most of the councils have discontinued their propaganda activity. This is shown by the fact that the number of meetings held by them was very small in 1916. The total number of meetings held during the year was 672, of which 410 were general meetings and 262 trade meetings. Another important activity of the councils, the making of arrangements for the elections of workmen's representatives to the socio-political bodies, has been discontinued entirely during the war because the Government has extended the term of office of the present representatives indefinitely until the termination of the war. The state of war has not made any changes in the character of the institutions created by the trade-union councils.

[1] Incomplete.

The number of committees created for special purposes has, however, decreased considerably, and, according to communications and business reports received by the general commission, many of these committees have reduced their activities to a minimum or discontinued them temporarily. The 469 councils included in the statistics for 1916 report the existence of 256 educational committees and 241 committees on juvenile membership. Committees for complaints relating to matters of factory inspection were in existence in 59 localities, committees for the combating of boarding and lodging systems in 28 localities, and committees for the protection of building trade workers in 134 localities.

Institutions very valuable to the working classes are the workmen's secretariates and legal information bureaus maintained by trade-union councils. The state of war has even increased their importance and made imperative their maintenance under all circumstances in spite of financial difficulties. In localities in which the councils on account of greatly decreased membership were unable to maintain workmen's secretariates from their own means the general commission has granted subsidies for their maintenance. The total number of secretariates maintained in 1916 was 113 as against 115 in the preceding year. The number of legal information and aid bureaus has decreased considerably in the year under review, their total number being 123. The reason for this decrease is to be found in the great lack of persons sufficiently familiar with social legislation to be able to give information and aid in disputes at law. Trade-union bureaus in which the affairs of trade-union councils are attended to by salaried employees were in existence in 21 large localities.

In the period preceding the war trade-unions in large localities generally endeavored to create a point of concentration for the trade-union movement by the establishment of trade-union halls. For financial reasons these endeavors could not be continued during the war. The statistics for 1916 show the existence of 73 trade-union halls, of which only 42 are built on land owned by the local council, the other 31 being located in rented buildings; 240 councils had made provisions for the lodging of traveling trade-union members, 33 councils having lodging houses of their own, mostly located in trade-union hall buildings, while the remaining 203 councils had made agreements with private hotels and lodging houses. The educational requirements of trade-union members were taken care of by the councils by the maintenance of libraries in 365 localities and of reading rooms in 88 localities.

The trade-union councils are supported by the contributions of the affiliated trade-unions. As a rule, the contribution is fixed per member per year. Separate contributions are sometimes levied for the council proper, for the secretariate, and for educational purposes.

Some councils assess female members lower than male members. The annual contributions of male members vary between 0.20 and 2.60 marks (4.8 to 61.9 cents).

The following two tables show the membership movement and total receipts and expenditures of German trade-union councils for the 16 years ended 1916, and their expenditures in detail for the years 1912–1916:

NUMBER, MEMBERSHIP, RECEIPTS, AND EXPENDITURES OF GERMAN FREE TRADE-UNION COUNCILS, 1901 TO 1916.

Year.	Councils reporting.		Number of—		Receipts (exclusive of strike collections).	Expenditures (exclusive of strike benefits).	Strike benefits paid from—	
	Number.	Per cent.	Affiliated trade-unions.	Affiliated trade-union members.			Council funds.	Strike collections.
1901	319	90.00	3,995	481,718	$70,016.98	$49,587.06	$6,508.35	$50,956.75
1902	365	93.00	4,742	614,722	64,829.77	67,941.38	3,337.47	14,455.88
1903	387	93.50	5,207	758,723	103,640.91	72,641.88	14,487.06	170,770.95
1904	405	93.50	5,559	924,066	94,179.46	94,867.04	10,466.29	62,789.64
1905	465	96.90	6,495	1,180.940	121,949.77	118,921.70	8,110.33	209,134 17
1906	526	95.10	7,390	1,500,206	160,065.71	133,275.48	6,644.72	63,675.71
1907	558	95.06	7,777	1,596,409	186,745.99	162,573.28	4,266.63	23,157.88
1908	606	97.27	8,438	1,560,896	210,940.35	206,954.80	1,396.58	1,840.22
1909	619	94.65	8,548	1,619,666	232,437.70	225,008.29	5,192.68	176,744.51
1910	653	95.91	8,883	1,892,953	268,261.22	245,614.81	5,580.39	153,786.08
1911	691	97.74	9,261	2,160,728	360,187.53	309,749.38	5,995.46	65,158.69
1912	717	93.38	9,418	2,339,571	437,630 12	389,300.88	5,024.18	31,001 88
1913	771	93.38	9,682	2,311,837	510,058.04	510,521.66	2,310.03	2,056.08
1914	578	70.49	7,847	1,384,355	396,517.28	423,446.03	870.37	546.69
1915	524	69.22	6,601	884,147	231,837.70	273,537.68	.....	.....
1916	469	.....	5,846	837,492	258,059.12	270,732.14	.....	.....

EXPENDITURES OF GERMAN FREE TRADE-UNION COUNCILS, 1912 TO 1916.

Object of expenditures.	1912		1913		1914		1915		1916	
	Number of councils.	Amount.	Number of councils.	Amount.	Number of councils.	Amount.	Number of councils.	Amount.	Number of councils.	Amount.
Propaganda	548	$23,739.55	612	$30,978.32	429	$18,669.44	243	$8,750.55	197	$4,888.76
Election of workmen's representatives	288	10,246.61	581	41,623.11	279	9,546.18	35	297.74	33	303.45
Statistics	83	1,544.62	71	1,460.61	75	2,173.42	29	412.93	18	118.05
Trade-union halls and rent of meeting places	58	36,767.19	76	40,454.05	71	50,169.21	48	28,483.13	56	39,340.45
Lodging houses and employment bureaus	144	13,937.28	177	15,248.90	127	9,266.29	47	9,045.43	26	11,330.23
Secretaries and bureaus of information	260	88,782.57	331	115,950.74	304	128,523.09	271	106,689.93	246	106,187.27
Libraries	507	26,552.95	543	40,145.84	468	26,728.35	286	14,058.42	200	13,255.41
Other educational purposes	.....	.....	.....	.....	236	21,445.94	139	10,763.31	67	6,450.28
Juvenile education	.....	.....	.....	.....	233	10,791.87	169	8,320.00	139	9,034.24
Strikes (from council funds)	180	5,024.18	88	2,310.03	24	870.37	.....	.....	.....	.....
Subsidies to families of soldiers and unemployment benefits	.....	.....	.....	.....	.....	.....	113	8,686.29	29	6,352.46
Costs of administration	616	56,058.04	663	68,428.09	494	61,619.39	423	43,055.63	368	35,173.78

The first of the preceding two tables shows that up to and including 1913 the financial strength of the trade-union councils has with small fluctuations steadily increased. The Correspondenzblatt, the organ of the general commission, in reviewing the statistics, states that "this upward movement of receipts is not the sole result of the increased trade-union movement but is largely due to the increased sphere of activities of the councils. With the outbreak of the war the total receipts and expenditures of the councils show, of course, a great falling off. That this falling off of the total receipts and expenditures has not decreased the importance of the councils within the trade-union movement can, however, be proved by the per capita receipts and expenditures. Per member and per year the receipts in 1901 were 61 pfennigs [14.5 cents]. By 1913 they had increased to 93 pfennings [22.1 cents] and in 1916 they amounted to 1.29 marks [30 cents]. During the war the per capita receipts have therefore not decreased but considerably increased and the per capita expenditures have moved parallel to the receipts."

WORKMEN'S COMPENSATION.

WORKMEN'S COMPENSATION PAYMENTS TO ENEMY ALIENS OR THEIR DEPENDENTS.

The declaration of war by the United States, and especially the Trading with the Enemy Act, has brought up the question of the rights of aliens to accident compensation under the various State compensation laws. Most of the State laws specifically provide that nonresident alien beneficiaries are entitled to compensation, although some of the acts establish limitations either by reducing the amount of benefits or by limiting the classes of beneficiaries to whom payment may be made.

This problem has become increasingly important since the declaration of war against Austria-Hungary. As pointed out in an article in the Economic World by Mr. A. R. Marsh,[1] in all of our important industries multitudes of Austrians, Hungarians, Bohemians, and Austrian Slavs of the various kinds, are to be found; and in certain of these industries, as coal mining, they do a very large part of the work. An authoritative and immediate declaration as to the legal status of enemy aliens and their dependents under the State compensation laws becomes apparent. A concrete case has just arisen in Wisconsin because of the refusal of a casualty insurance company to pay compensation to enemy aliens on the ground that such payments are now contrary to the Trading with the Enemy Act. The Wisconsin Industrial Commission immediately took the matter up with the War Trade Board, which advised the commission that a distinction is to be made between compensation payments to enemy aliens resident in the United States and those to alien residents in an enemy country itself.

The former class of persons are in fact not "enemies" in a technical sense, under our laws, unless they engage in hostile acts or give aid and comfort to the enemy by trading with actual enemy aliens or otherwise. Accordingly, until citizens of Germany and Austria-Hungary * * * who are employed in American industries are guilty of acts of war against the United States, or until they are specifically proclaimed by the President to be "enemies," they stand upon precisely the same footing as American citizens in respect of their

[1] "Workmen's compensation payments to enemy aliens or their dependents," by Arthur Richmond Marsh. The Economic World, New York, Dec. 8, 1917, p. 812.

rights under workmen's compensation laws—at least in so far as payments of compensation benefits to themselves or to beneficiaries resident in the United States are concerned. It is, therefore, in the opinion of the War Trade Board, not a valid defense for an insurance carrier against workmen's compensation claims that the insured or their beneficiaries (if resident in the United States) are nationals of an enemy country. Such a defense can come into play only upon sufficient proof that the recipients of the compensation have created for themselves a status as "enemies."

With regard to payments of compensation benefits to persons actually resident in enemy countries and nationals thereof, the War Trade Board seems to have found it much less easy to interpret the law. It was able to give the Wisconsin commission, at the conference, no definition of the rights of such persons nor of the manner in which they should proceed to enforce these rights, if they possess them. So far as is known at this writing the War Trade Board has even yet arrived at no final determination of the question. In the meantime insurance companies, employers or others holding moneys in trust for enemy alien dependents of fatally injured workers of enemy nationality are required by the Federal statute to report the fact to the Alien Property Custodian, Hon. A. Mitchell Palmer, Washington, D. C.

SELECTION OF PHYSICIANS UNDER ILLINOIS COMPENSATION ACT: A CORRECTION.

In an article on "Tendencies in workmen's compensation legislation in the United States," which appeared on pages 144 to 148 of the MONTHLY REVIEW for December, 1917, it was erroneously stated that Illinois in 1917 for the first time granted injured employees the right to select the physician under the compensation law. There has been no change in this medical provision since the enactment of the original law. An employee can select his own physician now as always, but does so at his own expense. He does not, however, as in the other States mentioned, possess the right of selecting the physician when the expenses are borne by the employer.

AMENDMENT OF WORKMEN'S ACCIDENT INSURANCE LAW IN AUSTRIA.[1]

The law of August 21, 1917, passed by both houses of the Austrian Parliament (*Reichsrath*), amends the workmen's accident insurance law of December 28, 1887, and the extension law of July 20, 1894, as follows:

The maximum amount of the computable annual earnings has been increased from 2,400 to 3,600 crowns ($487.20 to $730.80). In the case of apprentices working without or for a nominal compensation the maximum computable earnings are fixed by the new law at

[1] Austria. Reichsgesetzblatt, No. 156. Vienna, Aug. 31, 1917.

1,200 crowns ($243.60), in place of 600 crowns ($121.80), and the minimum computable earnings at 600 crowns. In the case of apprentices earning more than 1,200 crowns per year their actual earnings are to be considered as computable earnings.

The new law provides that in the future accidents occurring during the performance of domestic or other services, to which the insured is assigned by his employer, or by a superior in addition to his insurable occupation and during the period of employment in this occupation, shall also be compensated. It also settles a question which has been brought up ever since the enactment of the insurance law by explicitly providing that accidents occurring during the journey of the insured from his place of residence to his working place, or vice versa, shall be compensated in the same manner as accidents occurring while the insured is in the actual exercise of his employment.

The maximum amount of the pension (full pension) in case of total disability has been increased from 60 to 66⅔ per cent of the annual earnings. The full pension may also be granted temporarily as a *reconvalescence pension to injured persons who are no longer totally disabled* but need special care in order that their full earning capacity may be restored or their condition improved. One and one-half times the full pension may be granted to injured persons who, consequent to an accident, are so helpless after the termination of the medical treatment that they need an attendant and care. The maximum funeral benefit has been increased from 50 to 100 crowns ($10.15 to $20.30).

The provisions relating to survivors' pensions have been amended as follows: Illegitimate children, provided their paternity has been recognized or legally established, are given the same status with respect to pension claims as legitimate children. The maximum total amount of the combined pensions of all survivors of an insured person has been increased from 50 to 66⅔ per cent of the latter's annual earnings. Grandchildren and brothers and sisters of the deceased insured person have up to their completed fifteenth year of age a claim to pension in the amount of 20 per cent of his annual earnings, provided that the deceased has during his lifetime essentially contributed to their support. In case of their total disability on the completion of the fifteenth year of age their pension may be continued as long as the disability lasts.

The new law provides that the employer must pay the entire insurance premium. Formerly the employer paid only 90 per cent of the premium. The law became effective July 1, 1917, and all accidents occurring after June 30, 1917, are to be compensated according to the provisions of the new law.

RETIREMENT OF EMPLOYEES ON STATE RAILWAYS IN CHILE.[1]

The law of February 15, 1911, designated as "the law requiring State railroads to establish a savings fund," provides for the retirement of incapacitated salaried employees and laborers and for the compensation of persons injured while in the course of employment. The fund is constituted by deducting 5 per cent from the wages of all employees; by retention of the first monthly increase in wages automatically provided by law; of that part of the month's wages not paid to an employee on account of absence due to inability to work, or to the death of employees; of fines or penalties deducted from wages because of imperfect work; of unclaimed pay; of 1½ pesos (54.8 cents) out of every 1,000 pesos ($365) of receipts; and from other sources.

Office employees who have been in the service 10 years at the time this act becomes effective, and who are absolutely incapacitated for labor, may be retired with as many fortieths of 75 per cent of earnings as they may have been years in such service.

Day laborers employed as engineers, in maintenance of way, upkeep of engines, cars, etc., having 10 years' service may be retired when absolutely incapacitated for labor, with 50 per cent of wages.

Persons engaged in the upkeep of rolling stock, having completed 30 consecutive years of service, and being 65 years of age, or who become incapacitated, may be retired on 50 per cent of wages.

For computing earnings a year's work must be considered as not less than 250 days' work.

Permanent incapacity due to injuries resulting from accident is to be compensated by the payment of full wages.

Employees who by reason of accidents while in service receive injuries or contusions which result in temporary incapacity shall be compensated by the payment of full wages, not exceeding 6 months. If upon the expiration of this period they should not have recovered, their position shall be assured them for 6 months, but without pay.

In case of death from accident, the widow, children, and mother, if a widow, have a right to a yearly compensation for 10 years equal to one-fourth of the wages earned by the deceased employee.

Bonuses, extra pay, etc., are not considered as wages. All compensation is computed on the basic pay and biennial increases provided by law.

[1] Lejislacion sobre Accidentes del Trabajo. Ministerio del Interior. 1917. P. lxviii.

INDUSTRIAL ACCIDENTS AND DISEASES.

REPORT OF CALIFORNIA INDUSTRIAL ACCIDENT COMMISSION.

The following summary of the California Industrial Accident Commission's report for the year ending June 30, 1917, is taken from an advance press notice furnished by the commission. The report itself has not yet been received.

In 1916 there were 94,879 industrial injuries reported to the commission. This large total is divided into three main groups: Fatal injuries, 657; permanent injuries, 1,709; temporary injuries, 92,513. Fifty-seven of the fatalities occurred on the high seas. Total dependents to the number of 663 were left as the result of 300 fatalities; 113 partial dependents were left in 53 fatal cases, and in 304 fatal cases there were no dependents. The average age of the wives left dependent was 39.9 years, and the children's average age was 10.5 years. Twelve of the serious and permanent injury cases resulted in the commission awarding life pensions. There were 16,294 injuries that caused a time loss of 15 days or more. The remaining injuries came within the two weeks waiting period.

COMPENSATION AND MEDICAL COSTS.

California's 94,879 hurt workers were awarded $2,398,232.01 in compensation. This sum includes the estimates in all death and permanent injury cases. The medical, surgical, and hospital payments totaled $1,109,072.82. The total for both compensation and medical costs is $3,507,304.83.

ELECTION OF COMPENSATION.

Compensation can be elected by farmers and householders and their employees, as well as by those hiring casual employees outside of the regular business of the employer. The thousands of acceptances during the past fiscal year bring the grand total filed up to 25,890, divided as follows: Farming and kindred occupations, 13,619; domestic, 1,533; casuals, 10,738.

COURT DECISIONS.

On February 3, 1917, the Supreme Court of the State of California, by a unanimous vote, decided the Industrial Accident Commission had jurisdiction over injuries sustained in maritime service. The case is known as the North Pacific Steamship Co. *v.* Industrial Accident Commission. On May 21, 1917, the Supreme Court of the United States decided by a five to four vote that the New York compensation statute could not be admitted to operate in cases of maritime employment. The test case is known as Marie Jensen *v.* Southern Pacific Co. The similarity of the New York and California compensation laws resulted in the nullification of the California Supreme Court's decision when

the highest court of the land decided the issue. (Since this decision Congress has amended the Judicial Code to give concurrent jurisdiction to States having compensation laws.)

COMPENSATION DEPARTMENT.

There was an increase of about 18 per cent, compared to the previous year, in the number of controversies between employers and employees submitted to the commission for decision. The average time of the ordinary case between filing an application for adjustment of claim and a decision was 62½ days. The previous year's average was 75 days. Some cases required answers to interrogatories sent to Europe. In some instances years elapsed before the returns were made.

In deciding 1,393 contested cases there were held 1,962 hearings, and 260 cases were acted upon without hearing. The supplementary proceedings before the commission numbered 850.

Compensation was awarded to employees in 61 per cent and denied in 22.9 per cent of the cases filed. The main issues presented to the commission were "Extent and duration of disability" and "Whether injury was in the course of the employment."

RATINGS FOR PERMANENT DISABILITIES.

The California law stands alone in considering loss of earning power as the sole basis for awarding compensation in permanent injury cases. The three factors on which awards are based are: (1) Nature of injury or disfigurement; (2) occupation; (3) age. There were 1,487 permanent injuries referred to the department. Of this number 1,420 were rated; 31 were found not to be permanent; 3 lacked the necessary data, and 33 were undecidable at the end of the fiscal year.

MEDICAL DEPARTMENT.

During the last fiscal year the medical departments of the Industrial Accident Commission and the State Compensation Insurance Fund were separated. There were 529 formal opinions rendered in the San Francisco office and 82 in the Los Angeles office. These figures do not include the greater number of informal and personal examinations. There were 290 medical examiners appointed by the medical director in San Francisco and 150 by the assistant medical director in Los Angeles. The acceptance of industrial injury cases by poorly equipped medical men is deplored and "constant practice" is condemned. A plea is made for skilled surgery as not only the best, but also the cheapest for all concerned.

STATE INSURANCE.

The continued success of the State Compensation Insurance Fund is referred to with pride by the commission. The State insurance commissioner now has more power in supervising companies writing compensation insurance. A law requires that companies deposit surety bonds or securities with the State treasurer to an amount not less than the loss reserve. When it was proposed to increase compensation insurance rates to California employers approximately 37 per cent, the commission attempted, unsuccessfully, to have the law amended so the State Compensation Insurance Fund could make independent rates based upon its lower operating cost. The fund has, under the law, to continue to

charge the minimum rate approved by the insurance commissioner, but the excess will be returned to the policyholders in dividends.

The fund is now doing about 25 per cent of the total compensation business transacted in California and nearly three times the business done by its nearest competitor. The fund's business in 1917 shows an increase of approximately 40 per cent over the previous year, and will exceed $1,250,000. The sum of $268,-208.27 has been paid in refunds to policyholders at date of this report.

EFFORTS TO PREVENT INJURIES.

Boiler safety orders became effective on January 1, 1917. Committees of employers and employees and the commission's engineers were engaged during the year in preparing safety orders for window cleaning, trench construction, air-pressure tanks, electrical utilization, logging, and sawmill operations. After public hearings, these safety orders became effective on January 1, 1917, excepting the safety orders for logging and sawmill operations, which became effective on March 15, 1917.

The formation of shop committees was continually urged. All sources of publicity were utilized and the safety department reports a continuance of the fullest cooperation on the part of California's employers and employees.

The mining division was carried on in cooperation with the Federal Government, a mining engineer of the United States Bureau of Mines continuing to head the division. Practically all the operating mines, gold dredges, quarries, and construction tunnels in the State were carefully inspected at least once during the year. The safety requirements affected the safety of about 16,500 men.

United States mine rescue car No. 1 visited various mines in the State and gave training to employees in mine rescue and first-aid work. This car operates in Utah, Nevada, and California.

STATISTICAL INFORMATION.

The comparison of injuries by years is interesting. Deaths: 1916, 657; 1915, 533; 1914, 691. Permanent injuries: 1916, 1,709; 1915, 1,264; 1914, 1,292. Eyes suffering an impairment of vision or removal: 1916, 202; 1915, 175; 1914, 172. Arms amputated: 1916, 20; 1915, 13; 1914, 28. Fingers lost: 1916, 900; 1915, 798; 1914, 872. Legs or feet lost: 1916, 26; 1915, 28; 1914, 45. Toe amputations: 1916, 33; 1915, 40; 1914, 54. In 1916 there were four women workers killed, two in 1915, and two in 1914.

The average age of the killed during the three years 1914–1916 was 38 years and the average wage $19 a week.

Occupational diseases reported in 1916 numbered 348.

INDUSTRIAL ACCIDENTS AMONG BRIDGE AND STRUCTURAL-IRON WORKERS.

The Bridge and Structural Iron Workers' Union No. 1, of Chicago, has recently published a study of industrial accidents among its own members during the year April 1, 1916, to March 31, 1917. Aside from its intrinsic value, in throwing much light upon acci-

dents in a very hazardous trade, the study is of much significance as representing one of the few instances of a labor union making an effort to diagnose scientifically the accident problem as affecting itself. The following excerpts are taken verbatim from the report.[1]

During the 12 months ending March 31, 1917, there were reported to our office 239 accidents to our members while engaged in their regular employment. These 239 accidents in one year is on the very face of it, an entirely too high a toll for the privilege of earning our meager existence. It is regrettable that this local union does not have any previous records with which to make comparisons, in order to ascertain as to whether the present conditions of rushing or speeding up makes our work more hazardous than formerly. To the best of our knowledge no local union within our international organization has ever paid attention to the large waste of human life and efforts with its attendant suffering, incidental to the industrial hazards of our trade. But comparing the above figures with the records of Painters' Local Union 194 of this city—the only local union of the building trades in Chicago that has for a number of years kept statistical records as to causes and prevalence of accidents in their trade—it is shown that the percentage of occurrence is almost twice as high in our trade as compared with the painting trade, the percentage being 4.2 as against 2.2 amongst the painters. It may be added that in the latter are not included accidents causing less than a week's disability, while a small percentage—about 4 per cent—included in our report suffered no actual disability.

The following table gives a general summary of the conditions existing in our local union as to the average age of our members, conjugal relations, number of dependents, the total and average compensation, and amount of local accident benefit paid in accident cases; it also gives the percentage of members injured who did not receive any compensation or accident benefit.

GENERAL SUMMARY OF CONDITIONS OF INJURED MEMBERS OF BRIDGE AND STRUCTURAL IRON WORKERS' LOCAL NO. 1, APR. 1, 1916, TO MAR. 31, 1917.

Number injured.	Average age.	Per cent married.	Dependents.	Compensation.	Average compensation.	Local benefit.	Average local benefit.	Per cent receiving no compensation.	Per cent receiving no local benefit.
	yr. mo. da.								
21	26 6 8	52	20	$2,339	$111.38	$340	$16.00	38	38
82	34 6 3	73	128	8,025	97.86	1,355	16.52	39	40
70	44 1 11	81	126	6,091	87.00	1,065	15.21	33	39
35	53 4 14	86	46	11,244	330.74	890	26.20	40	50
4	61 3	75	3	564	141.00	175	43.75	25	25
27	No age.	90	42	924	34.22	330	12.22	63	63

* * * Of members injured * * * 21 were between 20 and 30 years of age; 82 were between 30 and 40 years; 70 between 40 and 50; 35 between 50 and 60; 4 were over 60 years of age, and 27 had neglected to report how old they were. More than three-fourths of our injured members were married and had a total of 365 persons depending upon them for support and protection.

[1] Industrial Accident Report to Bridge and Structural Iron Workers' Union, No. 1, of Chicago, Ill., for the period Apr. 1, 1916, to Mar. 31, 1917.

One of the interesting features of the information gathered through our accident records is the amount of compensation received by our injured members under the workmen's compensation law of Illinois. Although a considerable portion of them—40 per cent—received no compensation, presumably because their disability did not last more than one week, or through their neglect to make a proper demand for same, the total amount of compensation reached the respectable sum of $29,187. * * * Deducting the 96 members constituting the 40 per cent who received no compensation, we have an average of $204.10 for each of the injured members who did receive compensation.

This may be considered a fairly good argument against those who are averse to political activity by the forces of organized labor. Prior to the adoption of the workmen's compensation law of Illinois, it was almost impossible for the average workmen to secure any financial redress by the filing of personal damage suits, as the three judge-made defenses of the employers, viz., contributory negligence, assumption of risk, and the negligence of fellow servant, were generally strong enough to defeat the case of the injured worker. According to the report of the Liability Commission of Illinois (pp. 12, 13), the average amount recovered in settlement in and out of court, in personal damage suits, where the injury resulted in death, amounted to the paltry sum of $348.68. The long litigation necessary, and the great expense involved for attorneys and court costs, often left the widow or the dependent children without sufficient recompense to pay the bills contracted during the trial, much less any money to compensate her—as far as money can be considered a compensation—for the loss of her husband and the supporter of their children.

But large as the amount of compensation received may seem, and pleased as we may be for the great improvement secured as the result of the legislative activity of organized labor, we have no reason to be satisfied either with the present compensation law or with the methods of its administration. The insufficiency of the amount of compensation, the frequent delays in securing the same, owing to the refusal of the insurance companies to pay compensation when due, and the necessity of hiring an attorney to take up the legal fight with the shrewd attorneys for the insurance company, are all matters that will have to be taken care of, before we have any right to be satisfied in the matter of compensation for industrial accidents.

HOUR OF DAY WHEN ACCIDENTS OCCURRED.

	Accidents.		Accidents.
8–9 a. m.	12	12.30–1.30 p. m.	4
9–10 a. m.	30	1.30–2.30 p. m.	31
10–11 a. m.	43	2.30–3.30 p. m.	24
11–12 a. m.	37	3.30–4.30 p. m.	30
	122		89

Out of a total of 211 accidents that occurred during the regular working hours, 122, or 57.8 per cent, occurred in the forenoon; and 89, or 42.2 per cent, occurred in the afternoon.

CLASSIFICATION OF CAUSES OF ACCIDENTS.

Cause.	Number.	Per cent of accidents.
Struck by machinery or falling objects	124	51.9
Slipped and fell (lost balance)	43	18.0
Caught in machinery or material	23	9.6
Injured through defective scaffold	21	8.7
Stepped on nail, injured by rusty iron	14	5.9
Injured by own tools, slipped or broken	8	3.3
Burned by electric wires	2	.8
Overcome with heat	1	.4
Twisted ankle (no cause given)	1	.4
Scratched hand on column	1	.4
Motorcycle skidded, going to new job	1	.4
Total injured	239	100.0

That nearly 52 per cent of all accidents are caused by being "struck by machinery, or falling objects," gives a good indication as to what means of protection is most necessary. No work should be allowed to proceed where the workmen are exposed to the danger of falling objects, from men working above them, unless a safety floor or netting has been provided to intercept falling objects. A similar protection would also decrease the danger for those 18 per cent who slipped and fell. Accidents caused by defective scaffolding could be prevented by a more efficient inspection and supervision.

But in spite of all the care possible being exercised by the workman, a certain amount of accidents will occur in hazardous employment, as long as present "rushing" or speeding up is permitted to continue.

By shortening the hours of labor, by providing more time for rest and recreation, by making every accident much more expensive to the employer not only as an individual, but as a class, we will be able to most effectively combat the danger to which members of our craft are exposed.

The degree of injury varies from death within a few days or weeks, in five cases; fracture of skull, broken arms, ribs, and legs in a number of cases; scalp wounds and burns, that disabled the victim for weeks and days, to slight bruises that in a few cases did not disable the injured to continue his work. Permanent incapacity resulted in several cases, through the fracture of skull, the crushing of an eye, the loss of fingers in several cases, and through electric burns.

During the 12 months covered by this report, there occurred 12 deaths of members of our local union. A large percentage—41.7 per cent—was caused by accident at work. Of these five deaths, one occurred in May, one in July, two in August, and one in September. In one case death resulted within one day, in two cases within two days, in one case the injured lived six days, and in the one case resulting in lockjaw, the records do not state the period elapsing between injury and death.

SOCIAL INSURANCE AND ACCIDENT PREVENTION URGED BY THE GOVERNOR OF MASSACHUSETTS.

In his address to the legislature on its assembly in January, 1918, Gov. McCall, of Massachusetts, repeated his recommendation for some form of health and old-age insurance and also urged the neces-

sity of better accident prevention methods. As regards the need of accident prevention he said:

During the last two years accidents have nearly doubled in number and severity. Reports indicate that since last June the increase has amounted to an even greater degree—due in a measure to the supplanting of old and experienced workers by those who were inexperienced. It has been estimated that more people are now killed and injured in industry in the United States in a four-year period than were killed in battle or died of disease or wounds during the entire Civil War. This wastage of human life creates a heavy and an unpardonable drain in time of peace, but it is even more deplorable in time of war. We should increase the safeguards against accidents. There is a great social loss in addition to the individual loss which is suffered. Compensation is a very necessary and beneficent thing, but the prevention of the destruction of the lives and limbs of workers is far better than compensation, which can not restore them again. It is estimated that the economic waste from accidents alone in the Commonwealth exceeds $15,000,000, every year. I recommend that the legislature carefully investigate this subject, with a view to providing remedial legislation.

He refers to a recent study of the causes of dependency in Massachusetts, showing that dependency in three cases out of four was caused by the death from sickness of the father.

Where the dependency was caused by incapacity instead of death, sickness was again the preponderating cause. The men whose families were thus deprived of support had previously been employed as skilled workmen with good wages, and yet they were unable to make provision against death or serious illness. Life insurance had been sought by many of them, but the amount of the insurance had been totally inadequate—amounting in most instances to but a few hundred dollars—and was largely consumed by expenses of the last sickness and of burial. I believe these facts, and others to be found in the report to which I have referred, should receive the consideration of the general court. They indicate that the illness of our workers is a chief cause of the dependency which costs us great sums of money each year, and that a further cause is to be found in the premature death of productive workmen. A great amount of this staggering loss and the resulting expense might be averted by prompt and adequate medical care, such as a well-organized system of health insurance would supply, and such as it does supply in those countries which have established such a system. As I have said, general legislation should at the present session be undertaken with unusual caution. But the care of the workers has a very special reference to our efficiency in war. Their labor becomes all the more necessary, for the struggle is not merely between men, but between the productive forces of the nations.

It is especially important, the governor urges, to conserve the health and strength of the women workers who are replacing men in so many industries—

if we are to avoid the costly mistakes made by some of the nations during the earlier years of the war.

The places left in our social order by the men who have entered the military service must be taken by others, who in the first instance require training and are particularly subject to accident. We should not permit our in-

dustrial life to slacken. The farms and mills and factories which are essential to our strength should be kept producing at full capacity. Good authorities declare that for every man on the battle front seven are required at home to keep him an effective fighting unit. No subject can better engage your attention at a time like this than that which relates to the conservation of the human resources of the Commonwealth and the preservation and the efficiency of her men and women. A comprehensive system which would so far as possible do away with the waste resulting from accident and sickness would be a wise, humane, and beneficent measure. It would strengthen the hands of the country in war, and would result in the saving of very many millions of dollars each year to the Commonwealth. At the last session the committee of the legislature which considered my recommendations for health and old-age insurance were of the opinion that the advent of the war, after I had made my recommendations, made it advisable, as a measure of present economy, to adjourn their consideration. That view would necessitate their further adjournment until the end of the war. I believe firmly in the wisdom and justice both of health and of old-age insurance, and of the inevitableness of their coming. Very much is to be said in favor of both even in war time, and especially in favor of the immediate conservation of the health of our workers.

HOUSING AND WELFARE WORK.

ESTABLISHMENT DISABILITY FUNDS, PENSION FUNDS, AND GROUP INSURANCE FOR EMPLOYEES.

BY ANICE L. WHITNEY.

A study of the costs, management, benefits paid, etc., of establishment and trade-union disability funds was made by the Bureau of Labor Statistics and the results summarized in the MONTHLY REVIEW for August, 1917.[1]

In this article, which relates to the 431 establishments which were visited in connection with the study of industrial betterment, only those funds to which the employers make substantial contributions are considered. Many establishment funds were reported in which the only help extended by the firm was the use of a room for meeting purposes, some slight clerical assistance, or the promise of financial aid if a deficit should occur. These associations have been excluded from the report as being practically independent organizations. The details asked for in the study of industrial benefit associations were the percentage of the expenses paid by the different firms, the amount of dues brought to a monthly basis, the amount of the weekly sick and accident benefits and of death benefits, the number of sick, accident, and death benefits paid, and the amount paid out in benefits in the last fiscal year.

Of the 431 establishments visited, 80 reported benefit associations which come within the foregoing requirements. The number of employees in 78 of these establishments was 673,095; two establishments failed to report the number of employees. Fifty-eight of the establishments, with 617,342 employees, reported on the association membership. In these 58 associations the membership was 550,177, or 89 per cent of the total number of employees. This is a high percentage, since in 15 of these establishments a period varying from 2 weeks to 6 months must elapse, after employment, before the individual is eligible for membership. In 12 plants membership in these societies is made a condition of employment, 16 failed to report, while the remaining 52 report that there is no rule which compels employees to become members of the association. There is no doubt, however, that in some of the establishments, while there may not be a rule to this effect, yet indirectly there is strong pressure brought to bear upon employees to become members. The following table shows, by industries, the number of associations, the membership, the classified dues and benefits, and the percentage of

[1] Operation of establishment and trade-union disability funds, by Boris Emmet. MONTHLY REVIEW for August, 1917, pp. 17–36.

expenses contributed by the companies. The employees of all plants of one company in the telephone and telegraph industry have been shown in this table, since the data furnished relates to all and not simply to those places visited as in other sections of the study.

NUMBER OF BENEFIT ASSOCIATIONS, NUMBER OF MEMBERS, CLASSIFIED DUES AND BENEFITS, AND PROPORTION OF EXPENSES PAID BY COMPANIES SHOWN BY INDUSTRIES.

Industry.	Establishments having benefit associations.		Benefit associations.				Associations reporting dues per month to be—				
			Establishments reporting.		Members.						
	Number.	Employees.	Number.	Employees.	Number.	Per cent of total employees.	Under 25 cents.	25 and under 40 cents.	40 and under 75 cents.	75 cents and over.	Different sums, according to wages, etc.
Flour and grist mill products	3	1,532	2	1,360	1,100	81	1	.....	1	.....	1
Foundries and machine shops	12	54,270	9	42,180	36,065	86	.....	2	1	.....	9
Gas, electric light and power companies	7	[1] 18,166	4	14,131	12,875	91	[2] 1	.....	1	.....	4
Iron and steel	5	53,852	5	53,852	52,397	97	1	.....	2	.....	2
Mining, other than coal	3	6,549	3	6,549	4,955	76	.....	.....	.....	1	2
Railroads, electric	9	26,528	8	22,928	20,222	88	[2] 2	.....	4	.....	2
Railroads, steam	2	171,318	2	171,318	155,410	91	.....	.....	.....	.....	2
Telegraph and telephone companies	1	[3] 179,000	1	179,000	179,000	100	[2] 1	.....	.....	.....	.....
Textiles	6	14,214	3	7,351	5,221	71	.....	1	.....	.....	4
Other industries	32	147,666	21	118,673	82,932	70	[2] 4	2	4	1	13
Total	80	[1] 673,095	58	617,342	550,177	89	[4] 10	5	13	2	39

Industry.	Associations reporting benefits per week to be—				Associations reporting death benefits to be—					Establishments paying toward expense of associations.				
	Under $5.	$5 and under $7.	$7 and over.	Different sums, according to dues, etc.	Under $100.	$100 and under $200.	$200 and under $300.	$300 and over.	Different sums, according to dues, etc.	Under 50 per cent.	50 and under 100 per cent.	100 per cent.	Definite sums, regardless of proportion.	No fixed sum.
Flour and grist mill products	.....	1	1	1	1	.....	.....	1	1	2	1	.....	.....	.....
Foundries and machine shops	.....	4	.....	8	1	8	1	.....	2	7	2	.....	1	2
Gas, electric light and power companies	.....	.....	2	4	.....	1	1	3	1	1	2	2	1	1
Iron and steel	1	3	.....	1	1	3	.....	.....	1	.....	1	.....	2	2
Mining, other than coal	.....	.....	1	2	.....	1	.....	.....	2	.....	.....	.....	3	.....
Railroads, electric	.....	1	3	4	.....	2	2	2	2	5	2	2	.....	.....
Railroads, steam	.....	.....	.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....	2
Telegraph and telephone companies	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....
Textiles	.....	1	.....	4	1	1	.....	.....	4	1	2	.....	1	2
Other industries	1	1	3	17	5	2	2	2	9	7	9	3	6	7
Total	2	11	10	44	9	18	6	8	25	23	19	8	14	16

[1] Not including employees of 2 establishments, not reported.
[2] No dues.
[3] Including employees of all plants of one company.
[4] Including 8 associations in which no dues are charged.

As will be seen, the proportion of the expenses of the associations assumed by the employers varies considerably, although as already stated those companies which contribute only a negligible amount have not been considered. One company, which pays $12,500 annually, stipulates that an average membership of at least 50 per cent of the employees shall be maintained. Another company, in addition to its contributions to the benefit association, has provided a fund of $25,000, from the proceeds of which it cares for employees who are not eligible to join the benefit association. Still another company, not included in the count, has a fund of $1,000,000, the income from which is used in paying accident and sick benefits. This company follows no set plan in making the awards, but considers each case on its own merits, the chief factors in determining the amount awarded being length of service and the necessities of the case.

MANAGEMENT OF ASSOCIATIONS.

The management of the benefit associations is participated in largely by employees. For those companies which reported on this subject there were 34 associations which are managed jointly by the companies and their employees, although in four of these the companies really retain control of the management, since a majority of the association officers are company officials. Fifteen associations are managed by the employees alone, in several of these the company contribution being as much as 50 per cent of the benefit fund. The eight funds which are financed entirely by the companies are, of course, administered and controlled by them. There are six funds to which employees contribute, in the management of which they have no voice.

PHYSICAL EXAMINATIONS REQUIRED FOR MEMBERSHIP.

Usually in the large organizations physical examinations are reported as a requisite for membership. A fee of 50 cents or $1 frequently is charged for this examination. In several instances the company emergency hospitals are managed by the benefit associations, and in some others the regular dues of the association cover a certain amount of medical attention. One mining company has turned over its two hospitals, equipped at a cost of about $10,000 each, to the association, which furnishes medical attendance to the members and their families. One association has a provision, recently added to its rules, that $100 in addition to other benefits shall be paid to any member who must undergo an operation.

LENGTH OF MEMBERSHIP REQUIRED BEFORE ELIGIBLE FOR BENEFITS.

The length of time which must elapse after becoming a member before one is eligible for benefits in the various associations is not reported by 37 of the organizations. Thirteen associations pay benefits immediately; 5 have waiting periods of five, fifteen, or twenty-one days; 12 of four weeks; 2 of 2 months, and 2 of three months, and only 1 has a waiting period of six months. In a few cases there is a longer period of membership required before death benefits are paid than is required for payment of sick and accident benefits. One association in which membership is compulsory has a waiting period of four weeks before one is eligible for sick benefits, and three months before death benefits are paid.

It is generally necessary for the employees of those companies which furnish the entire amount of the disability fund to give a longer period of service before they become eligible for sick benefits and before payment is made for death from sickness than is required in those associations which are partly financed by the employees. Two of the eight companies which maintain such funds did not give any information on this question. One company pays sick benefits after 30 days' service, and death benefits after 1 year, though these benefits do not apply to anyone receiving $1,800 or more a year. Another of these companies makes employees eligible for sick and accident benefits during the second six months that they are employed, with compensation amounting to full pay for four days and half pay for eight days, the benefits increasing gradually in amount up to 15 years' service when full salary is paid for one month and half salary for six months. Death benefits are paid after six months' service. Three of the companies require one year of continuous service before sick benefits are paid. The one remaining company does not provide in its plan for any benefits for sickness under two years of service, but quite generally the plan has been supplemented by provisions for payment during the first seven days of absence for those employees of two years' service or more, and for payments after the first eight days of disability to employees of less than the required two years' service. These supplemental payments are being gradually systematized. Payments under the disability plan are graded according to length of service. Benefits for death from sickness are not paid to dependents except for five years or more of continuous service. This company which is a great public utility whose business extends over a large portion of the United States pays accident benefits from the date of accident even in those States in which there are as yet no compensation laws for workmen.

TIME BETWEEN BEGINNING OF DISABILITY AND PAYMENT OF BENEFITS.

The necessity of guarding against the feigning of sickness or the making of slight illness an excuse to be absent from work is undoubtedly the reason that so large a proportion of the associations do not pay from the beginning of sickness. Many of these associations which do not pay from the first in cases of sickness do, however, pay from the date of injury in accident cases, since the risk of malingering in cases of injury is not so great. Eighteen of the associations do not report the number of days intervening between the beginning of the disability and the payment of benefits. In 9 instances benefits are payable from the first day; 9 pay after three days; 2 each after four, five, and six days; 33 pay after seven days, and 1 each after ten days and fourteen days. One association pays from the first if the sickness lasts more than three weeks, another has a seven-day waiting period unless disablement lasts more than fourteen days when payment is made from the first, and still another pays nothing if disability lasts less than a week, but pays from the first if it lasts longer.

The maximum time for which benefits are paid in any twelve months is reported in all but nine cases. Seventeen associations pay benefits for a period of three months, 14 for six months and 12 for one year, the remaining associations paying for various fractions of a year. In one association those employees who have been members of the society for ten, fifteen, or twenty years may draw benefits, if necessary, for two, three, or four years, respectively. Several associations pay benefits for a longer period for injury than for illness.

INITIATION FEES.

The majority of the associations do not charge an initiation fee, only 20 of the 78 associations reporting that this is a requirement for membership. These fees vary from 25 cents to $2, the usual fee being $1. The entrance fee in four societies varies according to the different classes of dues, and in one depends upon the age of the applicant.

It might be expected that charging a substantial initiation fee, especially if there were a fairly large turnover, would have the effect of reducing the monthly dues or of increasing the benefits paid, but this does not seem to be borne out by the figures as reported. One of the associations, which has a membership of over 15,000 and which charges a fee of $2, reports the monthly dues to be 50 cents, and the benefits but $5 a week for a period of 27 weeks. In this association the company pays 20 per cent of the dues. In the other associations, which charge a fee of one or two dollars, if there is a reduction in the

dues or an increase in the benefits over these figures, it seems to be due to the fact that the company pays a much larger percentage of the expenses of the association.

FORFEITURE OF MEMBERSHIP.

In nearly all cases membership is forfeited upon leaving the employ of the company, but several associations provide that employees upon terminating their connection with the company shall be paid benefits, which they may be receiving at the time, until recovery or until the expiration of the time to which they are entitled to them. In two associations, members on leaving the employ of the company may retain their association membership by vote of the board of directors. In another association, if the person remains a resident of the town and is a member in good standing at the time of leaving, or if he is a pensioner of the company, membership may be retained, while still another allows an employee who has been a member for 10 years and who does not engage in other business or occupation to retain death benefits for himself and wife by paying the regular dues.

The variation in the length of time which elapses between the beginning of the illness and the payment of benefits in the various associations results in a great difference in the proportion of employees receiving benefits and is also an important factor in the cost of the scheme since a waiting period of from 7 to 14 days excludes a large proportion of the cases.

The following table shows the establishments which reported the sick, accident, and death cases and the amount of benefits which were paid during the fiscal year of each association preceding the date of the schedule covering the association:

NUMBER OF BENEFIT CASES AND AMOUNT OF BENEFITS PAID BY ASSOCIATIONS, BY INDUSTRIES.

[The data for the different associations cover in each case the fiscal year previous to the date the schedule was taken.]

Industry.	Sickness benefits.					Accident benefits.					Death benefits.				
	Associations reporting.		Number of cases.	Total amount of benefits.	Average amount of benefit.	Associations reporting.		Number of cases.	Total amount of benefits.	Average amount of benefit.	Associations reporting.		Number of cases.	Total amount of benefits.	Average amount of benefit.
	Number.	Members.				Number.	Members.				Number.	Members.			
Flour and gristmill products	1	1,000	55	$3,451.50	$62.75	.....	.....	.....	.....	.....	1	1,000	4	$900.00	$225.00
Foundries and machine shops	1	2,500	219	5,766.83	26.33	1	2,500	334	$2,970.60	$8.89	1	2,500	14	1,400.00	100.00
Gas and electric light and power companies	2	2,610	[1] 490	[1] 10,224.27	[1] 20.87	2	2,610	[2] 349	[2] 9,266.99	[2] 26.55	2	2,610	17	14,250.00	838.24
Iron and steel	2	21,819	[1] 1,800	[1] 41,247.57	[1] 22.92	3	32,172	[2] 1,482	[2] 24,573.83	[2] 16.58	2	32,136	238	48,820.95	205.13
Mining, other than coal	3	4,955	2,055	51,948.19	25.28	3	4,955	2,335	28,649.97	12.27	3	4,955	42	42,729.00	1,017.36
Railroads, electric	6	18,871	[3] 3,412	[3] 53,178.51	[3] 15.45	4	5,105	[4] 63	[4] 1,151.74	[4] 18.28	5	18,720	109	36,891.50	338.45
Railroads, steam	2	155,410	59,209	881,201.51	14.88	2	155,410	21,555	412,111.90	19.12	2	155,410	1,369	714,870.28	522.18
Telegraph and telephone companies	1	[5] 179,000	18,760	959,729.00	51.16	1	[5] 179,000	10,646	557,979.00	52.41	1	[5] 179,000	214	162,961.00	761.50
Textiles	1	1,340	[1] 152	[1] 2,625.01	[1] 17.27	2	5,040	[2] 74	[2] 1,040.41	[2] 14.06	1	1,340	2	100.00	50.00
Other industries	5	5,516	[3] 963	[3] 16,198.50	[3] 16.82	4	4,706	[4] 415	[4] 5,326.40	[4] 12.83	4	4,991	35	3,150.00	90.00
Total	24	393,021	[6] 87,145	[6] 2,025,570.89	[6] 23.24	22	391,498	[7] 37,253	[7] 1,043,070.84	[7] 28.00	22	402,662	2,044	1,026,072.73	501.99

[1] Including accidents for 1 association.
[2] Not including accidents for 1 association; included in sickness.
[3] Including accidents for 2 associations.
[4] Not including accidents for 2 associations; included in sickness.
[5] Including employees of all plants of 1 company.
[6] Including accidents for 7 associations.
[7] Not including accidents for 7 associations; included in sickness.

The benefit associations have been affected in recent years in many of the States by the enactment of workmen's compensation laws and in the majority of cases the by-laws of these societies have been amended to exclude cases of injury incurred in the course of employment. Since the majority of these laws do not provide for payments for injuries the disability from which lasts less than two weeks, many of the associations provide for payments for this intervening period. In a number of instances, also, where the compensation laws have been less liberal than the provisions of the benefit associations for disability from industrial accidents, the employers have voluntarily assumed the larger payments. A number of companies also which do not contribute to the associations and which have not been included in the statistics, pay a death benefit to the dependents of employees, usually stipulating a certain length of service as prerequisite to the payments.

PENSIONS.

The establishment of a definite pension system has been a comparatively recent manifestation among employers of the belief that the worker has a just claim on those for whom he works for some provision for his declining years. It is probably true, however, that while the majority of the plans state that the pensions are granted for "loyal and efficient" service, still the fact that the provision of these funds tends toward a more stable force, toward keeping the services of the more experienced and skillful workmen who might be able to command higher wages elsewhere, and toward moderating industrial unrest generally, has its weight also in determining firms or corporations to establish such funds.

There were 75 establishments of those visited, with a total of 1,101,500 employees, which maintain pension funds and which have a definite plan which is followed in the granting of old-age allowances. The conviction that it is both desirable and necessary to provide for the many workers who are unable for various reasons to save enough to care for themselves in old age seems to be growing among employers. Of the 66 funds for which the date of the inauguration of the plan was given, 32 were established in the years 1913 to 1917, 20 were established from 1910 to 1913, while only 14 were established previous to 1910.

The following table shows, by industries, the number of establishments having pension funds and the number of employees on pension rolls, and the amount paid out in pensions during the fiscal year preceding the date of the schedule covering the establishment. The employees of all plants of one company in both the iron and steel

and the telephone and telegraph industries have been shown in this table since the data furnished relates to all and not simply to those places visited as in other sections of the study.

NUMBER OF PENSION FUNDS, NUMBER ON PENSION ROLLS, AND AMOUNT OF PENSIONS, BY INDUSTRIES.

Industry.	Establishments having pension funds.		Establishments reporting employees on pension rolls.				
	Number.	Employees.	Number.	Total employees.	Number of employees pensioned.	Total amount of pensions.	Average amount of pension per year.
Foundries and machine shops	12	49,132	10	45,608	265	$125,427.00	$473.31
Gas, electric light, and power companies	6	25,705	4	13,670	201	96,300.00	479.10
Iron and steel	2	257,978	1	[1] 250,000	697	174,389.40	250.20
Offices	7	[2] 8,946	3	3,493	14	10,369.00	740.64
Ore reduction and smelting	3	[2] 3,315	2	[2] 200	156	49,275.00	315.87
Railroads, electric	9	[2] 36,775	6	[2] 22,421	148	68,305.55	461.52
Railroads, steam	7	381,595	4	307,407	4,163	1,321,297.32	317.39
Telegraph and telephone companies	2	[2] 179,000	1	[1] 179,000	284	153,360.00	540.00
Other industries	27	159,054	16	71,763	631	288,384.73	457.03
Total	75	[3] 1,101,500	47	[4] 893,562	6,559	2,287,108.00	348.70

[1] Including employees of all plants of 1 company.
[2] Not including 1 establishment, not reported.
[3] Not including 4 establishments, not reported.
[4] Not including 2 establishments, not reported.

CLASSES OF EMPLOYEES ELIGIBLE FOR PENSIONS.

In general the pension plans apply to all grades of employees, but there are four which exclude officials and directors, four which exclude salaried employees whose yearly earnings exceed amounts varying from $1,500 to $5,000, and only one which does not include the factory force. This company has about 11,000 employees, and since the plan covers only those in the office it necessarily debars from participation in its benefits many of those employees who most need such assistance. This seems to be true in a measure of all industrial pension plans since the lower paid and more unskilled class of workmen are less likely to give the continuous service necessary to the granting of a pension, and, if they do, in those cases where no minimum is established the amount is so small as to be of little practical help to the recipient. A case in point is that of one company which has on its pension rolls men receiving as little as $3 per month.

EMPLOYEES' CONTRIBUTIONS TO FUNDS.

The majority of the funds are supported and managed exclusively by the companies. Only four of them require contributions from employees. Three of these assess the employees 3 per cent of their

annual pay, and one assesses them 2 per cent, the amount contributed being returned without interest if the employee leaves the service of the company, although one firm pays 4 per cent interest if the employee is dismissed. The amount, exclusive of the initial fund, set aside by the companies each year for the maintenance of these funds, is usually a certain per cent, most frequently 1 per cent, of the total annual pay roll, or it may be a sum aggregating the amount of the pension allowances or the interest from trusts or other funds which may have been provided.

GENERAL RULES AND REQUIREMENTS.

There is a very decided similarity in many of the regulations governing the payment of pensions. The acceptance of a pension in nearly all cases does not debar the one receiving it from engaging in other work which is not prejudicial to the interests of the company. Usually a temporary absence due to illness or a reduction of the force is not counted in computing the length of service unless it exceeds six consecutive months, and most of the companies allow a break of one or, in most cases, two years in the continuity of service. Assignment of pension allowances is never permitted nor are the pensions subject to attachment for debts of the beneficiaries. Pensions are forfeited usually because of misconduct on the part of the pensioner or at the discretion of the pension board. The maximum employment age in most cases, for those reporting, is 45 years, but sometimes for inexperienced workers this limit is placed at 35 years.

The usual ages at which male employees are retired are 60, 65, and 70, by far the largest number of companies fixing this age at 65 years. For women the average retirement age is about five years less than that of men, although there are several cases where they do not become eligible for pensions before reaching the age of 70. The usual number of years of continuous service requisite to the allowance of a pension is 20, although the requirements in this regard range from 10 to 40 years. Many of the companies have several classes of service requirements, those employees with the longest required period of service to their credit being retired at an earlier age. Pensions for cases of total disability are given at the discretion of the company in many cases; in others a service period varying from 10 to 30 years is a requirement of the pension rules.

A minimum pension allowance is fixed by about half of the companies. In two cases this amount is as low as $5 a month, but the greater number fix the lowest amount paid at $18 or $20 a month. The method of determining the amount of the pension is much the same in the majority of cases, the most usual method being to compute the pension on the basis of the earnings for a certain period of

years. The required number of years of service and the percentage of the earnings are fairly uniform in the different establishments.

SPECIAL ALLOWANCES.

There are 53 firms which reported that while they have no pension fund or system of caring for aged employees, still provision is made for deserving cases. In several instances quite a number of persons are thus cared for, but while this may be a liberal arrangement on the part of the firm, there can be no certainty on the part of the employee that it will be continued and there is also the feeling that it is a gratuity instead of the "deferred wages" to which the employee may feel himself entitled because of his long and faithful service.

The chief objection to industrial pensions as now administered is not in the amount of pensions allowed, which in most cases is fairly liberal, but in the element of uncertainty which results from the fact that the firms universally stipulate that the establishment of such a fund does not form a contract, and that the right to discharge an employee is not affected by the length and character of the service he has rendered. There also can be no assurance to the employee that the firm may not be dissolved and that the assistance which he has confidently expected in his old age may thus be denied him.

GROUP INSURANCE.

One of the most recent evidences of the interest employers are taking in their relations with their employees is found in the growth of the group insurance idea. As in the case of the pension plan, it undoubtedly works toward more harmonious relations and toward the reduction of the labor turnover since it offers a strong inducement to employees to remain with the firm. Individual life insurance is too expensive to be within the reach of most workmen. The guaranty that, in the event of death, a sum will be paid which will be adequate to care for the family during the adjustment to the changed conditions and responsibilities must appeal strongly to that class of workmen who are unable to save anything toward the future and to those also who have reached an age where the rates would be greatly increased or who would be unable to pass the necessary physical examination.

CONDITIONS UNDER WHICH GROUP INSURANCE CAN BE PROVIDED.

The group plan can be offered to firms by the life insurance companies at greatly reduced rates since it does away with the medical examination and much of the usual expense incidental to the selling

of life insurance. In order to secure a satisfactory rate from the insurance company, the employer must offer conditions of employment which measure up to a certain standard. The occupations must not be extrahazardous, sanitary conditions generally must be good, and good drinking water must be supplied. This does not offer an obstacle in the case of most firms, for the ones most likely to wish to introduce such a plan are those which have already progressed far toward safeguarding the plant and providing good working conditions. It is evident, too, that the elimination of medical examinations is made possible through the physical examination on entrance which many companies require and through the work of the emergency hospital departments in caring for the health of employees, which results in lowering the number with serious diseases and maintaining the general health of the force at a high standard.

METHOD OF INSURANCE.

The method of insuring is to issue to the company a blanket policy which covers the entire group to be insured. The insurance company has a list of the employees included, with the age of each and the amount for which each is insured. A certificate is given to each individual, which names the beneficiary, the amount of insurance, and also gives the conditions under which it will remain effective. Naturally the employee's eligibility to the plan ceases upon leaving the employ of the company, but several of the plans allow the employee to continue his insurance at the regular rates, about the only advantage being that he does not have to take the medical examination, with perhaps the consequent increase in the premium.

COST AND SCOPE OF INSURANCE PLANS.

There were 32 firms, with a total of 136,318 employees, which reported that a part or all of their employees had been insured under the group plan. The largest number of these plans cover all employees, but some limit the plan to include those with a stated length of service to their credit. This service is for periods varying from 30 days to 2 years. One large company had insured as yet only its day laborers of one year or more of service, although it was planned to extend the insurance to other groups as fast as possible. Three companies make eligibility for life insurance contingent upon membership in the relief association, and still another company insures all below a salary of $4,000. One company, which insures only foremen and clerks, has an endowment feature which takes effect upon the employee reaching the age of 65.

Most of the companies pay the entire cost of the insurance scheme, but two of the companies pay 50 per cent, and another pays all after

five years' service, while those in the employ of the firm from one to five years are assessed according to their length of service. This had not worked out very satisfactorily, as those to whom it was free were ready to avail themselves of it, but comparatively few of the others had done so. One company which pays half of the costs has insured under the "term" plan. This differs from the ordinary group plan in the respect that the policy is renewed each year and that the premium increases from year to year as the employee grows older. The plan of this company, as well as of several of the others, carries a disability clause, agreeing to pay for total disability incurred before the ages of 60 or 65 are reached. Only one company is reported as making a rule that joining a labor union or participating in a strike invalidates the claim for insurance benefits.

CONCLUSION.

The plans in force vary somewhat in the extent of the provisions. Probably the most equitable and most satisfactory in its working out is one where the equivalent of one year's salary or wages, with of course a maximum limit, is paid in installments. This takes into consideration automatically any change in the employee's wages and provides for the family a year's income on the same basis to which they have been accustomed. This plan has been adopted by a number of the companies. Several of the plans provide for the payment of a fixed sum, these sums varying in the different establishments from $200 to $1,000, and still others for the payment of sums varying with the years of service until the maximum is reached, which is $1,000 in most cases, but which is as high as $2,500 in several instances.

The benefit, pension, and group insurance plans which have been outlined in this article, in so far as they tend toward the amelioration of the economic conditions under which the ordinary workingman struggles, are, it seems probable, steps toward the ultimate goal of better understanding and more cordial relations between employers and their employees.

FEDERAL HOUSING.

The problem of housing the large labor supply at the shipyards under the control of the United States Shipping Board has been under active discussion since last summer. The section on housing of the committee on labor of the advisory commission of the Council of National Defense first took it up, made a hasty survey to ascertain the house shortage at munitions and shipyard centers in August, 1917, called a conference of experts on August 30, held a meeting in Wash-

ington on September 21, and laid a report before the committee on labor detailing its activities and summarizing the results of its housing survey. As a result of the activities of this committee, the War Industries Board of the Council of National Defense appointed a special housing committee with Mr. Otto M. Eidlitz, of New York City, architect and builder, as chairman. Hearings were held in Washington during September, 1917, and a report submitted to the Council of National Defense containing recommendations for a Federal housing program.[1] The principal features of the proposed program were these:

(1) Giving of financial aid to such industries or communities as can clearly demonstrate their right to relief, preferably in the form of loans at a low rate of interest; (2) creation of an organization of reasonable permanency and authority having broad power to conduct building operations, to deal in real estate, and to borrow and lend money; (3) distribution of future contracts for war material in such manner as to prevent undue concentration of workers in any locality.

The committee emphasized the condition that Government aid for industrial housing should be considered as a war measure and be rigidly confined to cases where restriction of output of war materials would otherwise occur.

The committee has continued its work and drafted a clause for insertion in some appropriation bill for securing an allotment from Congress to permit the acquisition of land and the erection of houses for shipyard and munition workers where, in the opinion of the President, such action would be necessary for the national defense and security.

The United States Shipping Board has also had under consideration the housing problem. Several outside experts have had consultation with the board and the employment division of its Emergency Fleet Corporation has looked into the welfare aspects of the problem. The following letter written to the chairman of the Senate Committee on Commerce by the chairman of the United States Shipping Board concerning the interest of the board in the housing problem appeared in the Official Bulletin of January 2.

One of the most perplexing problems of the war to the United States Shipping Board, the Army, and the Navy has been the lack of housing facilities for the enormously increased army of labor. The War Industries Board appointed a committee on housing, with Mr. Otto M. Eidlitz, of New York, as chairman, to investigate and advise on this situation. This committee has investigated and advised on the immediate necessity of increased housing facilities, but owing to the fact that this problem had not yet reached a critical stage at the time

[1] See MONTHLY REVIEW for December, 1917, pp. 218 to 220.

Congress adjourned at its last session, and that no request had been made to Congress for an appropriation to provide necessary housing, Mr. Eidlitz was unable to do more than suggest. The Shipping Board also had appointed an advisory committee which thoroughly investigated housing conditions at the shipyards and recommended some action toward relieving the situation, but all committees were more or less handicapped by no special financial provisions for taking care of this unlooked-for situation.

In November I appointed Mr. J. Rogers Flannery to see what could be done to help the housing troubles at the shipyards. The demand for immediate action became so apparent when the situation was thoroughly investigated that the Shipping Board decided to start construction at once at the most critical points. Hog Island will be the largest operation and $10,000,000 has been set aside for the erection of thousands of houses to be erected in the vicinity of the Hog Island shipyard. Bristol, Pa., has also been assisted, and a large community site is being constructed.

Sparrows Point, Md., has been in need of housing facilities, and the Shipping Board is helping the Bethlehem Shipbuilding Corporation (Ltd.) to purchase about 400 five and six room brick houses to care for the shipyard employees. Baltimore, which is about 10 miles from the shipyards, is cooperating with the United States Shipping Board to the fullest extent and is giving invaluable assistance in helping to place the shipyard employees in homes, rooms, and apartments.

Chester, Pa.; Wilmington, Del.; Newport News, Va.; Newburgh, N. Y.; and many other shipbuilding points are being investigated and plans are under consideration for alleviating the housing situation.

We are treating the housing proposition from a very broad viewpoint, and in all cases where community sites are being planned are providing all the social, moral, and artistic features that will add to the social, moral, and physical well-being of the shipbuilding employees who will live in these communities. While protecting the investment of the Government, we are also adjusting the rents, purchase terms, etc., on such a basis that they will be within normal reach of the men who will occupy the houses.

The Shipping Board has invited the committee on housing to act as its advisory committee, has provided quarters for and is paying all salaries and clerical expenses of this committee and is attempting to work out this housing problem along the very broad lines that it deserves, hoping that eventually Congress will realize the necessity of providing the necessary appropriation with which to take care of the housing necessities of all branches of the Government. The Shipping Board is building up this housing organization in conjunction with the committee on housing so that no time may be lost, and when Congress decides to appoint an independent housing commission with the necessary appropriation to take hold and construct the necessary housing for all branches of the Government, standard town plans will have been laid out and standard types of houses that will permit of standard dimension parts and standard materials will have been decided upon. Everything will be ready. All preliminary foundation work will have been completed. Immediate action can be assured.

About $35,000,000 will be required to carry out the contemplated housing program of the United States Shipping Board. A very considerable amount will also be required by the Army and the Navy. A bill is being prepared by the housing committee of the Council of National Defense, and I hope that it will be favorably acted upon by Congress, providing finances for the necessary

housing. Housing facilities must be obtained for the large army of labor that must live where the Government's operations are being conducted on such an enormous scale, and should be coordinated and standardized in one commission for all branches of the Government.

The bill (S. 3389) referred to in the above statement was introduced in the Senate on January 5, referred to the Committee on Commerce, amended, and passed by the Senate on January 18. It is now before the Committee on the Merchant Marine and Fisheries of the House, where hearings on it are being held. This bill gives the United States Shipping Board Emergency Fleet Corporation power to purchase, requisition, or condemn any improved or unimproved land for housing purposes for the use of employees in Government owned or controlled shipyards. All necessary powers for maintenance and repair of properties acquired are also granted. The corporation has power to sell or rent houses to employees. Expenditures under its authority are not to exceed $50,000,000.

The corporation will fix the prices which it will pay for any property acquired, the seller, however, having the right to appeal to the court for additional compensation if dissatisfied with the valuations of the Emergency Fleet Corporation. In fixing the price to be paid for acquired property, the bill contains no provision respecting the method of valuation, whether the land should be purchased at prewar values or at values which may have been created as a result of Government work in the vicinity of a shipyard. The Emergency Fleet Corporation, however, under its price-fixing power, may quite conceivably take such values into consideration, and the courts, in their discretion, may or may not follow the policy of the corporation in that respect.

The powers under the bill will terminate upon the declaration of peace.

Pending consideration of this bill the United States Shipping Board Emergency Fleet Corporation has gone ahead maturing its plans as shown by the above letter, and an actual survey has been in progress on the housing of employees in the vicinity of Philadelphia, particularly at the new Hog Island shipyard on the Delaware River.

A group of several thousand homes to house the workers at the shipyard in question has been projected by the corporation after consultation with its housing experts, the city of Philadelphia, the Philadelphia Rapid Transit Co., and shipyard officials.

Under the plan projected the city and the Emergency Fleet Corporation will share the cost of opening certain streets in one of the southwestern wards of Philadelphia, lay sewers, and make other essential improvements. The homes to be constructed will be permanent dwellings and will probably be of brick.

If necessary, in order to safeguard itself against real estate profiteering, the Government will exercise its power to seize the land if the price asked by the owners is not satisfactory.

As a part of this housing enterprise, the rapid transit company of the city of Philadelphia is planning to extend its lines to connect with the section of the city in question.

COMPANY HOUSING.[1]

Rapid labor turnover as emphasizing the difficulty which the employer finds in retaining his men has brought about a situation which requires that the employer should undertake the housing of his workmen. The manufacturer "has long felt that the housing problem is one to which he ought to give serious attention. He has disliked doing so, and for good reason, but the present crisis is forcing upon him the conviction that he has got to tackle it, and that in the future he ought to control it."

In a pamphlet on "Industrial Housing Problems" the author emphasizes the need of practicality in handling housing problems; points out the failure to distinguish carefully in housing matters between skilled and unskilled workmen, low and high paid men; outlines the essentials of a workmen's house; and presents some comparative costs.

Assuming the cheapest construction, wood framing, wood lathed and plastered on the inside and rough boarded and shingled on the outside, as the standard or 100 per cent, the relative costs of various houses would be as follows:

	Per Cent.
Wood framing, inside wood lathed and plastered, outside rough boarded and clapboarded and painted	102
Wood framing, inside wood lathed and plastered, outside wire lathed and stuccoed	108½
6-inch concrete wall, inside furred and lathed and plastered, outside rubbed smooth	112
6-inch concrete wall, inside furred and lathed and plastered, outside stuccoed	116
8-inch hollow tile, inside plastered direct, outside stuccoed	111
8-inch brick wall, inside furred and lathed and plastered	115½
Wood framing, veneered with 4-inch brick, inside lathed and plastered	113

In discussing architectural design the author emphasizes utility and points out the frequent tendency to insist on porches for houses at the expense of sunlight. A layout of streets conforming to the

[1] Industrial Housing Problems, by Leslie H. Allen. Boston, Aberthaw Construction Co. [1917.] 31 pp.

contour of the ground is favored, not only because of the more pleasing effect, but also because of its lesser expense as obviating the necessity of cuts and fills, embankments, and retaining walls. In city development it is considered better to limit the amount of land to the tenant and to use the land that would otherwise be allowed him in the maintenance of parks and playgrounds and allotments for gardening.

For successful company housing the need of large-scale operations is stressed, as well as the need for strict and careful supervision and education of the tenants.

EMERGENCY HOUSING ASSOCIATION OF THE DISTRICT OF COLUMBIA.

The act of Congress approved September 25, 1914 (Statutes at Large, 1913–15, chap. 310) proscribed the erection of new dwellings or the alteration of existing buildings for dwelling purposes in alleys of the District of Columbia, i. e., roadways or passages less than 30 feet wide, and all existing dwellings in alleys were to be demolished or abandoned for dwelling purposes after July 1, 1918.

It is now contended that the enforced evacuation of the houses will work hardship upon the poorer classes of people, mostly low-paid or insufficiently paid wage earners, inasmuch as there is a pronounced shortage of houses in the District of Columbia growing out of the demand for house room for Government war workers. In order to prevent any stay in the enforcement of the law six months hence, an Emergency Housing Association of the District of Columbia has been organized. The object of this association is "to promote in every possible and legitimate manner, the erection of model, sanitary, inexpensive homes for the poor people who will be dispossessed of their present dwellings by congressional action on July 1, 1918." The organization is in the nature of a philanthropic promoter for the organization of a model homes company or for the securing of Government aid to provide homes for these alley people who will be dispossessed of their present dwellings by governmental action. The association has at present about 25 active paying members.

WAR HOUSING IN AMERICA, AND BRITISH PRECEDENTS.

While Great Britain has a large background of experimental legislation in housing, the United States is without such experience. Without the compelling necessity arising from economic conditions our efforts at housing and town-planning reform have been tentative

and have consisted mainly in restrictive as distinguished from constructive legislation.

Practically no positive State or municipal action has been taken for the provision of houses for workmen. This matter has been left to speculative building, philanthropic enterprise, and industrial corporations. All these agencies, however, Mr. Frederick L. Ackerman, of the American Institute of Architects, states, in a reprint of an article in the December number of the Journal of the American Institute of Architects (Washington, D. C.),[1] either have failed to solve the problem or at best are only temporary expedients for the solution of the problems of industrial housing.

Mr. Ackerman reviews at length British war-housing precedents. Landlordism and land monopoly in Great Britain have forced upon Parliament a thorough understanding of their retarding effect upon industry and housing particularly, and in its war-housing program provision has been made for absorption of the unearned value of land arising from the establishment of munition plants and housing developments connected therewith. During the war at least and as long as the Government is in possession of land taken over for the purposes indicated, no compensation will be paid for land values created by governmental operations.[2]

A second feature of the British program has been the development of town-planning principles and their acceptance as fundamental to real housing reform. There is, too, a general movement against the tenement as a permanent institution, "and the program of progress in England looks forward toward its complete eradication."

Finally, in the background of British housing experience lies the garden city movement, the aim of which is the dispersion and ruralization of the population. Furthermore, with the garden city movement has been developed experience in cooperative enterprise. The so-called public utility society, which is the organizing agency of the garden city or garden suburb, has, as its central idea, the substitution of the principle of ownership of shares in a company for the personal ownership of the individual home. The shares carry with them the right of tenancy of the house and call for collective responsibility in the management of the whole estate, whereas the system of personal ownership of the house does not necessarily carry with it responsibility for the condition of the surrounding estate.

Certain political institutions in England have also favored housing reform. The Local Government Board has given direction and

[1] Ackerman, Frederick L.: What is a House? Journal of the American Institute of Architects, Dec., 1917.

[2] See also article on "War housing in Great Britain" in the December, 1917, issue of the MONTHLY REVIEW, p. 220.

greater unity to the house-building schemes of the municipalities by the exercise of its power in sanctioning loans to these authorities.

With this precedent of State control and direction and the use of public money for the purpose in question, it has not been a far step for the Government to take direct initiative in the building of emergency and permanent housing for war purposes. Such a step, too, was necessary to increase materially the amount of housing accommodation. For, while the experience in housing by local authorities may have been valuable as an example, it has not sufficed to meet the housing shortage. Local initiative has proved relatively futile, so much so that "the opinion was practically unanimous in favor of State initiative, State construction, and State operation."

The United States, lacking all this background, is in a position, however, to profit by this British experience of "collective ownership and administration," "collective regulation," and "collective provision," quoting the writer. Such a policy "we should adopt and put into immediate execution." This American program, Mr. Ackerman has conceived of as follows:

By all odds, the most important consideration in home building during war or during peace is the land problem. We should secure land for industrial housing purposes by precisely the same methods as were used by the British Government. This includes the safeguarding of adjacent areas by a provision which will enable the Government at a later date, during the war, to secure property for the expansion of an operation at prewar costs. Incorporated and as an essential feature of our scheme, should be a provision whereby the unearned increment in the land thus taken by the Government should be preserved so that the income from it will be used for the sole benefit of the community. The conservation of the unearned increment in the land for the benefit of the community is in itself the prime factor in the economic solution of the housing problem.

The Government should organize a separate department or a nonprofit Government corporation for providing the communities adjacent to munition plants wherever it develops that additional accommodations are required. This organization should acquire land under powers as suggested above, plan new villages, install roads, sewer, water, and light, erect houses and other buildings of amenity required by these communities, and it should operate the properties until such time as they may be transferred to others. This organization should cooperate with the various departments of the Government which operate or control plants providing munitions of war. Control of this organization by the latter departments should be limited to a determination as to the extent and the general nature of the building operation. It is important that the management of the civil community should be in charge of a community manager, working under the direction of the central administration, which would in turn frame a general policy of management in cooperation with the department operating the plant.

The entire property, land and buildings, should be retained and operated by the Government during the war and for a certain period thereafter. Future values and conditions can only be determined accurately at a future date. Therefore, when conditions and values have been adjusted, local nonprofit

land companies with limited dividends should be formed to operate the properties—that is, rent houses, operate the utilities, or rent land to private builders or companies—and use the surplus income from rentals to pay interest and amortization of the Government's loan. The important features of this scheme, which is similar to the British copartnership operations in many respects, are that no land will be sold; title will remain in the original company and be handled as a community investment; rentals will be readjusted from time to time like tax valuations; and, since there can be no profit as a result of an increase of land values due to the development of a community, the increase in rentals would provide for the interest, the amortization of the Government's loan, and an income to be enjoyed by the entire community which would approximate twice the revenue which this community would obtain under ordinary conditions and through the ordinary methods of taxation. This method conserves the unearned increment of land values created by the Government's house-building operations. The new communities gradually purchase the underlying lands and the original houses at cost, thus reimbursing the Government.

It may be argued that these new communities may collapse after the war, in which case the Government loan will, of course, be lost, but by extending the period of Government ownership and control beyond the war and by the organization of local land companies in each community to anticipate that danger, other industries may be secured. The chances that such an investment would be a loss are indeed remote. It is highly probable that a well-planned community, organized upon this basis, with provision of adequate homes and communal buildings, would draw industries to it without effort. This suggestion is not one of theory; it would merely be putting into effect, with but slight modifications, the practices in general use in the garden cities and the garden suburbs of England. The advantage of the scheme lies in the fact that we do not have to determine the complex details of ownership and future management at this date; and the success of this method depends solely upon the degree of thoroughness with which these communities are carried out. If they are well planned, well constructed, and well organized, there is not the slightest doubt regarding the future value of the investment.

SYNOPSIS OF THE PROGRAM FOR THE UNITED STATES.

First, create a central body with—

(*a*) Powers to acquire land under authority equal to that created by the Defense of the Realm Act. The final disposition of property need not now be treated.

(*b*) Powers to survey needs for housing facilities and to determine, in cooperation with a central priority board, the relative importance of industrial operations.

(*c*) Powers to design and construct communities where the needs of such have been made evident by the survey.

(*d*) Powers to operate and manage these communities during the war, and for a few years thereafter, along lines of policy similar to that expressed by what is known as the Copartnership Tenants or Public Utility Societies in England.

(*e*) Powers to maintain a high standard of physical well-being in munition plants (adopting the standards set by our most progressive industrial corporations) and to organize community activities within the communities thus created.

The second step: Create a commission to study the final disposition of these properties. Such a commission should consider such questions as—

(*a*) The organization of local nonprofit corporations to manage and develop the communities created during the war.

(*b*) The saving of the appreciation of land values for the benefit of the community as a whole.

(*c*) The establishment of that part of the cost which should be written off as belonging to the cost of war.

(*d*) The basis upon which such communities could be transferred to municipalities, or nonprofit corporations.

By such a method it would be possible to advance immediately upon new schemes, and in the event of a lack of progress upon schemes now under way, such schemes could be taken over by the Government and handled through the central body.

INFANTS' NURSING ROOMS IN FACTORIES OF FRANCE.[1]

Under the joint supervision of the minister of labor, the minister of munitions, two physicians, and the committee on female labor, an investigation relative to nursing rooms and crèches in factories employing women was recently made in France, covering the period January to May, 1917.

This investigation dealt exclusively with crèches and nursing rooms especially established for working women employed in commercial and industrial establishments, whether under State or private control.

Owing to the invasion the northern and northeastern districts of the country were not included.

The influence of the war was found to vary in different sections. In some localities it had resulted in the closing of such institutions, while in others many new ones have been established and others are under consideration.

Of the 39 establishments included in the investigation, 38 reported the number of female workers employed as 25,443. The following table shows the distribution of crèches and their importance based upon the number of women employed.

[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale, Aug.–Sept., 1917, p. 341.

NUMBER OF CRÈCHES, BY INDUSTRIES AND CLASSIFIED NUMBER OF WOMEN EMPLOYED.

Number of women employed.	Industries.										
	Food.	Chemicals.	Rubber, paper, etc.	Textiles.	Clothing and cloth.	Hides and leather.	Woodworking.	Metallurgy.	Pottery, glass, etc.	Tobacco and matches.	Total.
Not over 100			2		1						3
Over 100 to 200				1		1					2
Over 200 to 300	1	1		2					2		6
Over 300 to 400			1	2			1	2			6
Over 400 to 500											
Over 500 to 600			1	2	1						4
Over 600 to 700											
Over 700 to 800				2						1	3
Over 800 to 900		1		1				1		2	5
Over 900 to 1,000								1		1	2
Over 1,000 to 1,100								1		1	2
Over 1,100 to 1,200		1								1	2
Over 1,200 to 1,300								1			1
Over 1,300 to 1,400											
Over 1,400		1		1							2
Total	1	4	4	11	2	1	1	[1] 6	2	6	[1] 38

[1] Not including 1 crèche, established jointly by all furnaces in the commune, not reporting number of employees.

Of the 39 crèches reported, 1 was for infants artificially nursed, 1 for infants nursed at the breast, while 37 were open for the care of both classes of infants. In 16 of the latter rooms were designated for each class, in 18 the classes were not separated, and 3 did not report. There were 619 infants cared for in 37 of these institutions, an average of 1 infant for every 40 female workers and 17 for each crèche.

There were 139 persons employed in the 39 crèches, being an average of 1 attendant for every 4.45 infants. A physician is employed in each of 27, and in 2 of these a midwife is also employed; in 10 the community physician is called in; in 4 the physician is a specialist; 1 is supplied with a physician appointed by the city crèche society; and in 1 medical supervision has not been found necessary. In 16 crèches separate rooms are provided for infants whose health is suspected. In 1 an establishment hospital is maintained to which sick infants are transferred. A majority of the crèches refuse admittance to infants whose health is suspected.

The cost of installing crèches per 100 female laborers ranges from less than 500 francs ($96.50) to 30,000 francs ($5,790). Twenty-eight establishments reported the monthly operating expenses per 100 female employees, which ranged from less than 50 francs ($9.65) to 300 francs ($57.90).

Monthly wages, which were reported for 108 of the 139 employees, ranged from 30 francs ($5.79) to 250 francs ($48.25).

Information as to nursing rooms was received from 16 establishments employing 13,491 females. These had established 17 nursing

rooms for infants. Of these 1 had no infants under its care, and 3 were just beginning to operate. In 13 others employing 12,446 females there were 76 infants cared for, or approximately 1 for every 150 women, and 6 for each room.

Medical surveillance was provided for in 15 rooms. In 3 establishments (4 rooms) isolating wards are provided for those who are sick or whose health is subject to suspicion. No room will receive infants whose state of health is under suspicion. A physician may authorize their admittance, in certain rooms, if the health of other infants is not endangered thereby.

The cost of installation per crib (reported for 10 nursing rooms) ranged from 41 francs ($7.91) to 1,250 francs ($241.25), while the monthly operating expenses (reported for 12) per crib ranged from 5.2 francs ($1) to 112.5 francs ($21.71). There were 203 cribs prepared in the 12 establishments.

Many establishments reported that young mothers were permitted to bring their infants and leave them at the watch house, sanitation rooms, dressing rooms, infirmaries, stockrooms, etc., and sometimes even in the rooms of the employer's residence. Special privileges are accorded in some cases regarding absence from work for a half hour or more and reporting late for labor and leaving early.

In many cases these privileges are considered sufficient by the workers themselves. Many mothers prefer to nurse their infants at home. In some cases there is marked opposition to the establishment of crèches. Mothers consider their infants better cared for at home, and that they themselves are there better able to secure the rest needed. In one particular instance (Toulouse), because of the unanimous negative response of mothers when consulted, an enterprise already begun was abandoned.

Establishments often object to providing crèches because of nightwork, as that necessitates night guards, and because expense of maintenance would be excessive because of the few mothers in employment.

In some industries work is done both in the shop and at home. This is especially true in industries where the employees are almost exclusively females. As a general rule upon marriage the employee becomes a home worker. In Paris many employers express a willingness to establish nursing rooms, but experience has shown that mothers fail to make use of them.

In response to a circular issued by the Chantiers et Ateliers Augustin Normand at Havre and addressed to employers of female workers, it was decided on May 14, 1917, to establish cooperative crèches in those sections where none are in operation. In this scheme each employer is to share pro rata in the expense fund. An anonymous endowment amounting to 100,000 francs ($19,300) has been placed at the disposal of the city for the establishment of such institutions.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, DECEMBER 16, 1917, TO JANUARY 15, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between December 16, 1917, and January 15, 1918, in 85 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, DEC. 16, 1917, TO JAN. 15, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Fort Smith Electric Power Co., Fort Smith, Ark.	1,200	7,000	Adjusted.
Controversy, Davis Coal Co., Thomas, W. Va.	1	.....	Do.
Controversy, Dixie Tannery Co., Bristol, Tenn.	.....	.....	Pending.
Strike, electricians, Helena Light & Ry. Co., Helena, Mont.	10	90	Adjusted.
Threatened strike, Chesapeake & Ohio R. R. Co., Richmond, Va.	1,900	30,000	Do.
Strike, Porto Rican American Tobacco Co., San Juan, P. R.	15,000	5,000	Do.
Controversy, Tampa Dock Co., Tampa, Fla.	400	.....	Do.
Strike, Bell Telephone Co., Jacksonville, Fla.	126	40	Do.
Sympathetic strike, Bell Telephone Co., Waycross, Ga.	12	.....	Do.
Controversy, Garfield Smelting Co. and boiler makers, Garfield, Utah.	80	1,800	Do.
Strike, Terry Shipbuilding Co., Savannah, Ga.	620	.....	Do.
Controversy, sheet metal workers, Chicago, Ill.	250	.....	Do.
Controversy, Colorado Midland R. R. Co. and shopmen	100	.....	Do.
Threatened strike, packing houses and retail provision markets, Pittsburgh, Pa.	850	2,200	Do.
Threatened strike, slaughterhouses, New York	400	.....	Adjusted before commissioner's arrival.
Threatened strike, Big Four R. R. Co., boiler makers and blacksmiths, Indianapolis, Ind.	.....	.....	Pending.
Threatened strike, machinists, boiler makers and blacksmiths, Cincinnati, Indianapolis & Western R. R. Co., Indianapolis, Ind.	.....	.....	Do.
Threatened strike, blacksmiths, Cincinnati & Northern R. R. Co., Van Wert, Ohio.	.....	.....	Do.
Strike, packing-house employees, Seattle and Tacoma, Wash.	.....	.....	Do.
Investigation, Northern Iron Co., Port Henry and Standish, N. Y.	.....	.....	Adjusted.
Strike, Gun Metal Products Corp., Brooklyn, N. Y.	30	.....	Adjusted before commissioner's arrival.
Strike, telephone operators, Southwestern Bell Telephone Co., Henryetta, Okla.	39	3,500	Adjusted.
Strike, Great Western Sugar Co., Billings, Mont.	500	.....	Factory closed for season, which automatically disposed of controversy.
Threatened strike, machinists, Oshkosh, Wis., at—			
Challoner Co.	7	.....	Pending.
S. M. Harding Co.	6	.....	Do.
Oshkosh Manufacturing Co.	24	80	Do.
Dobera-Bell Co.	28	.....	Do.
Termott-McMahon Co.	26	40	Do.
Universal Motor Co.	34	50	Adjusted.
Fine Erring Co.	33	.....	Do.
Dauber-Kratch Co.	14	.....	Pending.
Threatened strike, street-railway men and electricians, Toledo, Ohio.	.....	.....	Do.

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, DEC. 16, 1917, TO JAN. 15, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Connecticut Electric Steel Co., Hartford, Conn.	30	40	Do.
Strike, box makers and sawyers, Chicago, Ill.	500	1,500	Do.
Threatened strike, boiler makers, Southern Pacific R. R. shop, Ogden, Utah.	114	700	Adjusted.
Strike, Metropolis Bending Works, Metropolis, Ill.	190	390	Unable to adjust.
Threatened strike, meat cutters and packing-house employees, Los Angeles, Cal.	600	200	Adjusted.
Strike of common laborers employed by contractors engaged in construction of buildings for Holt Manufacturing Co., Peoria, Ill.	50		(See note.)
NOTE.—Increase of 1½ cents granted and accepted. Men returned to work. Men wanted further increase which company refused, claiming they were now being paid 1½ cents more than prevailing rate in Peoria. Men did not cease their work.			
Controversy, telephone operators, Boston, Mass.	3,400	8,000	Adjusted.
Controversy, Wyoming Valley Metal Trades Federation and employees, Wilkes-Barre, Pa.	7,000	5,000	Pending.
Controversy, Aluminum Casting Co., Detroit, Mich.	22		Unable to adjust.
Controversy, Curtiss Aeroplane Co. and plumbers, steam fitters, and electrical workers, Buffalo, N. Y.	500		Adjusted.
Threatened strike, Wabash R. R.—railway clerks.			Pending.
Controversy, Kelly Cloak Co., Cleveland, Ohio.	50	60	Adjusted.
Strike, electrical workers, Casper, Wyo.			Pending.
Controversy, Chicago, Terre Haute & Southern R. R. Co., Terre Haute, Ind.	450	1,000	Do.
Controversy between Associated Weighmasters' & Scalesmen's Union and United Weigher's Association, New York.			Do.
Controversy, stationary firemen, Lowell, Mass.			Do.
Controversy, Lincoln Motor Co. and its electricians, Detroit, Mich.	100	500	Unable to adjust.
Controversy, Fairbanks, Morse Co. and its pattern makers, Beloit, Wis.			Adjusted.
Strike, Southern Bell Telephone Co., Princeton, Ind.	15		Unable to adjust.
Controversy, American Steel Foundry Co. and its iron molders, Granite City, Ill.	86		Pending.
Controversy, Florida East Coast R. R. Co. and its shop employees, St. Augustine, Fla.			Do.
Controversy, electrical workers, Pittsfield, Mass.			Do.
Controversy, telephone operators, Little Rock and Pine Bluff, Ark.			Do.
Controversy, Manitowoc Shipbuilding Co., Manitowoc, Wis.			Do.
Controversy, Chicago, Peoria & St. Louis R. R. Co. and its mechanical force, Springfield, Ill.			Do.
Controversy, Maney Milling Co. and stationary engineers, Omaha, Nebr.	2	20	Adjusted.
Controversy and strikes, dyers, Philadelphia, Pa.:			
Piece dyers	80		Pending.
Skein dyers, mercerizers and helpers, etc.	3,000		Do.
Controversy, C. B. & Q. R. R. Co. and car service men, Beardstown, Ill.			Do.
Controversy, Scholl Manufacturing Co. and metal polishers, Chicago, Ill.			Do.
Controversy, Dayton Steel Foundry Co. and its molders and car makers, Dayton, Ohio.	25		Do.
Controversy, Pa. R. R. Co. and carmen, Columbus, Ohio.			Do.
Controversy, Toledo Shipbuilding Co., Toledo, Ohio.			Do.
Controversy, Oregon-Washington R. & N. Co. and clerks, Portland, Oreg.			Do.
Controversy, Alexander Hat Co., Reading, Pa.			Do.
Controversy, General Electrical Co., Schenectady, N. Y.			(See note.)
NOTE.—Employees of General Electric Co. resumed work on advice of president of International Molders' Union.			
Controversy, Allyne-Ryan Foundry Co. and pattern makers, Cleveland, Ohio.			Pending.
Controversy, Delta Electric Co., Marion, Ind.			Do.
Controversy, Local Union, No. 11, heat and frost insulator workers and employers, Baltimore, Md.	38		Adjusted.
Lockout, Dewman Dozier Co., Atlanta, Ga.			Pending.
Controversy, Busch, Diesel, Sulzer Manufacturing Co. and pattern makers, St. Louis, Mo.			Do.
Controversy, Clark Bros. Co. and molders, Olean, N. Y.			Commissioner reports no controversy exists.
Controversy, Nash Motor Co. and pattern makers, Kenosha, Wis.			Pending.

The following cases, noted in the statement of December 14, have been disposed of—

Strike, machinists, American Woodworking Machinery Co., Aurora, Ill. Adjusted.

Threatened strike, Emmonds Coal Co., Bayard, W. Va. Adjusted.

Controversy, firemen, Passaic and Garfield, N. J. Unable to adjust.

Strike, clerks and freight handlers, Norfolk, Va. Adjusted.

Strike, Lake Torpedo Boat Co., Bridgeport, Conn. Adjusted.

Strike, piano and organ makers, Lyon & Healy Co., Chicago, Ill. Factory operating and strikers practically all employed elsewhere.

Strike, street-car employees, St. Paul and Minneapolis, Minn. Adjusted.

Strike, jewelry workers, Chicago, Ill. Union called strike off and urged men to return to work.

Controversy, Utah Light & Power Co., Salt Lake, Utah. Adjusted.

Controversy, machinists, Swift Packing Co., East St. Louis, Ill. Commissioner learned that men had secured work elsewhere.

Threatened strike, packing industries, Chicago and entire West. Adjusted.

Strike, shell shop employees, Pollak Steel Co., Cincinnati, Ohio. Adjusted.

Controversy, Michigan Central R. R. Co. and its machinists, boilermakers, and blacksmiths, Detroit, Mich. Commissioner reports machinists' controversy adjusted; boilermakers and blacksmiths, pending.

Strike, street-railway employees, Charleston, W. Va. Adjusted.

Controversy, A. G. Cuthbert Co., Chicago, Ill. Adjusted.

Threatened strike, electrotypers, Boston, Mass. Adjusted.

Controversy, Chicago, Rock Island & Pacific R. R. Co., Rock Island, Ill. Adjusted.

Strike, shirt manufacturing industry, Mahanoy City, Pa. Adjusted.

Controversy, Tintic mine owners and employees, Eureka, Utah. Adjusted.

Controversy, International Arms & Fuse Co., Bloomfield, N. J. Adjusted.

Controversy, meat cutters, Kansas City, Mo. Adjusted.

IMMIGRATION.

IMMIGRATION IN OCTOBER, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During 1917 the figures for the first three months show a considerable decrease from month to month. The decrease from the preceding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May show a decrease of 48.9 per cent. The figures for June indicate an increase of 5.5 per cent over those for May. During July immigration reached a very low point, only 9,367 immigrant aliens having been admitted, a total even smaller than that for May, which was the smallest total for any month in many years. As compared with figures for July, however, those for August show an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August the figures for September show a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	[1] 19.9
February	59,156	46,873	13,873	24,740	19,238	[1] 22.3
March	96,958	92,621	19,263	27,586	15,512	[1] 19.4
April	136,371	119,885	24,532	30,560	20,523	32.3
May	137,262	107,796	26,069	31,021	10,487	[1] 48.9
June	176,261	71,728	22,598	30,764	11,095	5.5
July	138,244	60,377	21,504	25,035	9,367	[1] 15.6
August	126,180	37,706	21,949	29,975	10,047	7.3
September	136,247	29,143	24,513	36,398	9,228	[1] 8.2
October	134,440	30,416	25,450	37,056	9,285	.6
November	104,671	26,298	24,545	34,437	.....	.....
December	95,387	20,944	18,901	30,902	.....	.....

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during October, 1916 and 1917, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, OCTOBER, 1916 AND 1917.

Race.	Admitted.		Departed.	
	October, 1916.	October, 1917.	October, 1916.	October, 1917.
African (black)	840	961	97	89
Armenian	125	33	1	101
Bohemian and Moravian	37	6	6	5
Bulgarian, Serbian, Montenegrin	156	5	21	14
Chinese	233	154	227	197
Croatian and Slovenian	29	6	1	2
Cuban	316	90	319	158
Dalmatian, Bosnian, Herzegovinian	6	2	4	1
Dutch and Flemish	618	153	62	57
East Indian	9	2	12	5
English	3,796	1,162	764	1,171
Finnish	688	67	126	127
French	3,695	685	199	284
German	1,054	219	45	44
Greek	4,624	376	289	183
Hebrew	1,705	320	8	30
Irish	3,216	411	248	338
Italian (north)	402	193	649	43
Italian (south)	3,383	1,157	1,030	53
Japanese	694	738	85	142
Korean	32	41	11	10
Lithuanian	45	3	1	3
Magyar	50	1	14	1
Mexican	2,253	114	77	62
Pacific islander	.....	.....	.....	.....
Polish	330	39	2	83
Portuguese	1,368	479	33	15
Roumanian	61	21	4	7
Russian	365	98	467	207
Ruthenian (Russniak)	106	.....	2	7
Scandinavian	2,876	294	433	570
Scotch	1,662	599	201	319
Slovak	37	3	.....	2
Spanish	1,232	449	729	384
Spanish-American	248	216	50	47
Syrian	88	22	9	7
Turkish	93	10	.....	11
Welsh	86	30	12	16
West Indian (except Cuban)	120	68	66	47
Other peoples	378	58	32	19
Not specified	.....	.....	817	.....
Total	37,056	9,285	7,153	4,861

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

CALIFORNIA.—*Industrial welfare commission. Bulletin No. 1. Report on the regulation of wages, hours, and working conditions of women and minors in the fruit and vegetable canning industry of California. May 1, 1917. Sacramento, 1917. 176 pp. Illustrated.*

This report is noted on pages 184 to 186 of this issue of the MONTHLY REVIEW.

DISTRICT OF COLUMBIA.—*Report of the Health Officer. 1917. Washington, 1917. 254 pp.*

One section of this report is of interest to labor, namely, that pertaining to the eight-hour law for females. It is stated that during the year ending June 30, 1917, 1,735 establishments came within the purview of this law and that in the execution of the law 11,140 inspections were made. Complaints were received in 109 cases and inspections based on such complaints numbered 112. It is further stated that 9 violations of the eight-hour law for women were referred to the corporation counsel for prosecution and 6 such cases were pending at the beginning of the year. Fines were imposed in 9 cases, amounting to $160; in 1 case personal bonds were taken; in 3 cases a plea of nolle prosequi was entered; 1 case was dismissed; and 1 case was pending at the close of the year. The cost of enforcing the law is given as $4,574.67, exclusive of the undistributed cost of supervision.

INDIANA.—*Bureau of Statistics. Sixteenth biennial report for 1915 and 1916. [Indianapolis] 1917. 881 pp. Illustrated.*

Includes a report of the work of the five free employment bureaus, stating that for the year ending September 30, 1916, a total of 21,381 men and women were given employment, an increase of 85 per cent over the preceding year. The disbursements of the five offices amounted to $8,439.27, making the cost of securing each position approximately 39.5 cents. The private employment agencies, it is stated, have been well conducted during the year. "The abuses formerly so prevalent in this business are now almost exterminated and the agencies are conducting their affairs on a trustworthy basis."

KANSAS.—*Industrial Welfare Commission. First biennial report. From July 1, 1915, to June 30, 1917. Topeka, 1917. 65 pp.*

This report is noted on pages 142 to 145 of this issue of the MONTHLY REVIEW.

MASSACHUSETTS.—*Bureau of Statistics. Collective agreements between employers and labor organizations in Massachusetts, 1916. Labor Bulletin No. 121 (being Part III of the annual report on the statistics of labor for 1917). Boston, 1917. 234 pp.*

Statistical tables show that of 1,354 unions reporting, 764, in 1916, had written agreements, 67 had verbal agreements, and 523 had no agreements; that of the written agreements, 418 were signed or verbally accepted by all employers, 238 by more than half the employers, and 108 by half or less employers; and that the total membership of unions having written agreements signed or verbally

accepted was 171,311, or 71.5 per cent of the total membership of unions reporting.

MASSACHUSETTS.—*Department of Health. Public Health Bulletin, October, 1917. Boston, 1917. pp. 233–256.*

This bulletin briefly reports all cases of anthrax in Massachusetts during nine months of 1917, noting the fact that the increase (39 cases as compared with 31 during 1916) had been coincident with the shipping of hides from new areas in foreign territory with regard to which knowledge as to prevalence of diseases is meager. A table indicates that there were 8 cases in 1908, 7 in 1909, 7 in 1910, 6 in 1911, 11 in 1912, 8 in 1913, 8 in 1914, 11 in 1915, 31 in 1916, and 39 in 1917 (nine months). Six of the 39 cases resulted fatally; one case was pulmonary anthrax, the remainder being external. Thirty-five of the cases were diagnosed as being infected through the handling of hides, 3 from the handling of hair, and 1 from the handling of wool, this diagnosis being confirmed bacteriologically in 25 cases, and "was undoubtedly correct in 7 other cases—a total of 32 certain cases."

NEW YORK.—*Department of Labor. Industrial Commission. Annual report for the nine months ended June 30, 1916. Transmitted to the legislature April 17, 1917. Albany, 1917. 289, 236 pp.*

This report is presented in 10 parts: Report of the commission; report of the legal bureau; report of bureau of inspection; report of bureau of workmen's compensation; report of bureau of mediation and arbitration; report of bureau of employment; report of bureau of industries and immigration; report of bureau of industrial code; report of bureau of fire hazards, boilers, and explosives; opinions of attorney general construing labor laws. There is appendix giving the proceedings of the first industrial safety congress held at Syracuse, December 11 to 14, 1916, an account of which appeared in the MONTHLY REVIEW for November, 1917, pages 169 to 172. The report of the employment bureau shows a total of 33,625 individual orders from employers asking for 49,624 persons, and that of 50,288 persons referred to positions 29,496 (58.7 per cent) were reported as having actually been placed. Of the males reported placed in positions, 35.11 per cent were laborers and 15.55 were agricultural workers; of the females, 36.32 per cent were day workers and 17.15 per cent were domestics. The bureau of mediation and arbitration reported 328 industrial disputes, involving 222,325 persons directly and 31,629 indirectly, and a total loss of time amounting to 9,581,163 days, or an average of about 29,211 days for each strike or lockout. Increase in wages was the principal cause in 270 disputes. About 74 per cent of the days lost was on account of 17 disputes (5.2 per cent of the total) in clothing and millinery trades. The bureau intervened in 96 disputes and was successful in 52.

OHIO.—*Industrial Commission. Bulletin, vol. 4, No. 13, Dec., 1917. A survey of the workmen's compensation insurance field in this country. Columbus, 1918. 93 pp.*

This report contains a survey of the operations of the Ohio State insurance fund. It is issued as a communication to the subscribers to the fund and is an effort to determine the amount the Ohio plan has saved the employers of the State. This saving is computed at $8,186,942.30 from July 14, 1911, to May 15, 1917. The report further states that for the single year 1917 the Ohio State insurance plan has saved its subscribers, as an absolute minimum, $5,000,000. The report also contains two sets of comparative insurance rates for practically all risks or classifications. One compares the Ohio rates of March 1, 1912, with those in effect July 1, 1917; the other compares the rates

of eight States (New York, California, Illinois, Wisconsin, Indiana, Michigan, Kentucky, Colorado, and Pennsylvania), which were in effect in 1917.

UNITED STATES.—*Civil Service Commission. Thirty-fourth annual report for the fiscal year ended June 30, 1917. Washington, 1917. xxix, 237 pp.*

States that on June 30, 1917, there were 517,805 officers and employees in the executive civil service, of which number 326,899 held positions subject to competitive examination under civil service rules, an increase of 29,973. The remainder, 190,906, held positions not subject to competitive examination and were divided as follows: Presidential appointees, 12,134; clerks in charge of contract stations, 5,600; clerks in third and fourth class post offices, 71,000; mail messengers, 8,150; star-route, steamboat, and screen-wagon contractors, 12,035; pension examining surgeons, 4,502; Panama Canal work, chiefly as laborers and minor employees, 19,938; unclassified laborers, 33,094; excepted from examination, and classified positions filled upon noncompetitive examination, 24,453. About 35,000 mechanics of all kinds were recruited for arsenals and navy yards through the efforts of the commission's local boards (3,000) of examiners, with the assistance of the United States Department of Labor and the American Federation of Labor. The commission recommends that the minimum entrance salary for stenographers, typists, and clerks be placed at $1,000, and "a general system of retiring annuities, based upon length of service, the annuity to be provided by deductions from the salaries of employees invested under the supervision of the Government, the interest on which will be sufficient to provide the annuity to be paid."

A retirement system would give stability to the service, create an inducement to capable men to continue in it, contribute to improved administrative methods, and make possible a standardization of salaries and other needed reforms. The benefits to the service from an equitable retirement system would justify a direct contribution from the public Treasury to create an annuity for superannuated employees in the service at the time the system is established.

—— *Department of the Interior. Bureau of Mines. Seventh annual report of the director of the Bureau of Mines to the Secretary of the Interior for the fiscal year ended June 30, 1917. Washington, 1917. 106 pp.*

This report is devoted largely to an account of the progress of investigations being conducted by the Bureau of Mines. One section includes an outline of some of the more important achievements of the bureau during the year. The laws governing the work of the bureau are also given.

—— *Department of Labor. Children's Bureau. Child Labor in Warring Countries. A brief review of foreign reports. By Anna Rochester. Industrial series No. 4. Bureau publication No. 27. Washington, 1917. 75 pp.*

This report indicates that the countries whose standards of school attendance and protection from premature and exhausting employment are most nearly comparable with our own have maintained their standards without change during three years of war. The hope is expressed that the report will call attention to the growing concern in the warring countries for the welfare of children and the earnest efforts now being made in the midst of war to improve their condition, and that it will aid in showing not only the importance of maintaining here all the present industrial protection afforded to women and children but of carrying this protection forward notwithstanding war conditions. A more extended summary of this bulletin appeared in the MONTHLY REVIEW for July, 1917, pages 32 to 34.

UNITED STATES.—*Department of Labor. Children's Bureau. From School to Work: A study of children leaving school under 16 years of age to go to work, in Waltham, Mass., an industrial community of about 30,000 inhabitants. By Margaret Hutton Abels. Washington, 1917. 59 pp.*

This report is noted on pages 146 to 151 of this issue of the MONTHLY REVIEW.

—— —— ——. *Maternity and Infant Care in a Rural County in Kansas. By Elizabeth Moore. Rural child welfare series No. 1. Bureau publication No. 26. Washington, 1917. 50 pp. Illustrated.*

OFFICIAL—FOREIGN COUNTRIES.

AUSTRALIA (QUEENSLAND).—*Department of Labor. Report of the director of labor and chief inspector of factories and shops for year ended 30th June, 1917. Brisbane, 1917. 61 pp.*

The following summary, taken from the report, indicates the scope of the activities of the Department of Labor:

Number of registered factories	2,486
Number of shops with employees	3,022
Number of shops without employees	3,069
Number of employees in factories and shops	44,389
Number of factory accidents (Brisbane)	122
Number of industrial awards in operation	125
Number of industrial agreements in operation	32
Overtime for year worked by females in Brisbane factories and shops (hours)	41,143¾
Overtime for year worked by males in Brisbane shops	17,060½
Value of railway and steam passes issued	£4,259 8s. 9d. ($20,728.55)
Amount refunded	£2,643 1s. 1d. ($12,862.42)

During the year ending March, 1917, special permits to commence work were issued to 34 children under the age of 14. Arrears of wages secured by the department on behalf of employees during the period covered by the report amounted to £11,196 1s. 3¼d. ($54,485.64). The State labor exchanges registered 30,191 persons seeking employment and sent 15,780 to employment, the number placed being 52.3 per cent of the supply. Of the persons injured 101 were adults and 21 were under 18 years of age; 116 were males and 6 were females.

CHILE.—*Ministerio del Interior. Lejislacion sobre Accidentes del Trabajo. Published under the supervision of the director of the Office of Labor. Santiago de Chile, 1917. lxx, 339 pp.*

This volume gives the text of the law concerning compensation of industrial accidents promulgated December 30, 1916, in the Diario Oficial, and the rules and regulations thereunder decreed, June 19, 1917.

It also reproduces the provisions of the civil code relative to civil responsibility in cases of bodily injuries caused by accidents, as well as the provisions of the law of February 15, 1911, concerning compensation for injury or death of employees caused by accident while in the service of the State railroads. (See page 183 of this number of the MONTHLY REVIEW.)

The director of the Office of Labor furnishes information as indicated by the following titles: History of the law (of accidents); definition and classification of industrial injuries; employer; employees, laborers, apprentices, etc.

GREAT BRITAIN.—[*Census Office*] *Census of England and Wales, 1911. General report, with appendixes. London, 1917. 383 pp. Price, 4s. 6d. net.*

According to this report the population of England and Wales in 1911 was 36,070,492, an increase of 10.9 per cent over the number at the preceding census in 1901. The report contains an abstract of the 10 volumes comprising the full census returns.

—— *Committee on the production and distribution of milk. Interim report. London, 1917. 7 pp. Price, 2d. net.*

This committee was appointed in April, 1916, to report on "the production and distribution of milk, including the consideration of the steps which should be taken (1) to stimulate production, (2) conserve milk supplies during any period of excess, (3) to provide for the special needs of children in urban centers, (4) to effect economies in the cost of production and distribution, (5) to organize supplies by administrative action so as to reach all sections of the community, and (6) other kindred subjects." The committee felt called upon to deal first with the problem of increasing or at least maintaining milk production at its prewar level, giving special attention to the possible shortage and high prices of milk during the present winter. This contingency, it appeared to the committee, could be met by action along the following line: (1) The uncertainty and sense of insecurity which exist among dairy farmers, particularly in respect of prices, labor, and feeding stuffs, should, as far as possible, be immediately reduced; (2) the surplus summer milk should be used to the best national advantage; (3) the loss of milk during the warm months of the year by waste or souring before it reaches the consumer should be reduced. Recommendations along these lines were submitted. The committee also suggested that the use of milk in the manufacture of milk chocolate be prohibited, as was done last year, and also that the surplus milk unavailable for manufacture into dried or condensed milk should be used for making cheese, "as this preserves some 60 to 70 per cent of the nutritive solids of milk (including most of the protein), whereas butter only retains 30 to 40 per cent (excluding the protein)."

—— *Departmental committee on prices. Committee appointed by the Board of Trade to investigate the principal causes which have led to the increase of prices of commodities since the beginning of the war. Second and third interim reports. Bread, flour, and wheat prices; freight charges; and potato, tea, and sugar prices. London, 1917. 22 pp. Price, 3d. net.*

This report is noted on pages 112 to 116 of this issue of the MONTHLY REVIEW.

—— [*Department of Labor*]. *Directory of employers' associations and of trade-unions for 1917. London, 1917 144 pp. Price 2s. net.*

This list of employers' associations, it is explained, is confined to associations which are concerned with matters relating to the employment of labor, the intention being to exclude chambers of commerce, of agriculture and of shipping, trade protection and insurance societies, and all associations with purely commercial or technical objects. The associations are classified by groups of trades, and national associations and federations are distinguished from local associations. Many local associations are, however, affiliated to, or are branches of, national associations.

—— *Department of Scientific and Industrial Research. Advisory Council. Report on the resources and production of iron ores and other principal metalliferous ores used in the iron and steel industry of the United Kingdom. London, 1917. 145 pp. Price 2s. net.*

GREAT BRITAIN.—*Department of Scientific and Industrial Research. Science and Industry. A series of papers bearing on industrial research No. 1. Industrial Research in the United States of America. By A. P. M. Fleming, M. I. E. E., London, 1917. 60 pp. Illustrated. Price, 1s. net.*

The following excerpt taken from the introduction outlines the purpose and scope of the report:

The purpose of this memorandum is twofold. It is intended primarily to furnish a record of some observations relating to industrial research as conducted in the United States. To this end descriptions are given of the laboratories in various works, and in educational, State, and private institutions, with a statement of the endowment funds available, and a discussion of legislative and other influences tending toward the nationalization of research, and of the methods of selecting and training scientific investigators, and coordinating their activities and results. The experience so related suggests naturally the consideration of our own country's position in similar matters, and to the account of what is being done in the United States a discussion in very general terms is subjoined, outlining some fundamental considerations which indicate the increasing necessity for research in this country, and offering some suggestions regarding the development of such work, and the relation which any comprehensive national scheme should bear to British industries and to research institutions in the overseas dominions.

——*Imperial War Conference, 1917. Extracts from minutes of proceedings and papers laid before the conference. London, 1917. 163 pp. Price, 1s. 6d.*

——*Local Government Board. Reports to the Local Government Board on Public Health and Medical Subjects. London, 1917. 57 pp. Price, 9d. net.*

This pamphlet includes statistics of the incidence of notifiable infectious diseases in each sanitary district in England and Wales during the year 1916.

—— —— *Reports to the Local Government Board on public health and medical subjects. (New series, No. 112). Reports on an inquiry into cases of anthrax (malignant pustule or external anthrax) suspected to be due to the use of infected shaving brushes. By Francis J. H. Coutts, M. D., London, 1917. 22 pp. Price, 6d net.*

Reference to a number of cases of anthrax caused by the use of infected shaving brushes was made in the MONTHLY REVIEW for July, 1917 (pp. 127, 128). The report here noted gives details of 19 cases (10 fatal) among civilians and of 18 cases (11 fatal) among soldiers at home, besides noting 28 cases among troops in France. Practically all of these cases occurred in 1915 and 1916. It was not definitely proved, however, that all of the cases resulted from the use of infected shaving brushes but the source was traced to a shaving brush in each of at least 11 of the civilian cases and a shaving brush was suspected in each of at least 8 of the military cases. The report suggests the danger of using Chinese, Siberian, or Russian horsehair in the making of shaving brushes, and calls attention to another danger, namely, that of misdescription of consignments resulting in the receipt by retailers of horsehair labeled as goats' hair, the latter not being subject to the Home Office regulations requiring disinfection. It is admitted that disinfection of hair containing anthrax spores is not altogether a simple matter and that there is some reason to think that some of the cases recorded arose from hair which had been submitted to a process of disinfection in which the complete disinfection of the anthrax spores had not been obtained. It is very important that disinfection should be successful and if effected by the steam process it is stated that the cases or bales should be opened, the bundles removed and most of the strings cut, unless the temperature inside the steam apparatus is maintained at 230° F. for half an hour. Furthermore, anthrax spores may remain dormant and yet develop in full virulence when conditions become favorable, emphasizing the importance of complete disinfection.

The report states that the Local Government Board has under consideration what administrative action is required to secure that hair used in the manufacture of shaving brushes is satisfactorily sterilized before the brushes are manufactured. "It will be necessary also to secure that imported brushes are similarly free from infection. For this purpose a guaranty of origin may be desirable as well as examination of samples of brushes after importation."

GREAT BRITAIN.—*Ministry of Labor. Employment Department. Reports upon openings in industry suitable for disabled sailors and soldiers. No. I. Attendants at electricity substations. April, 1917. 6 pp. No. II. Employment in picture theaters. May, 1917. 6 pp. No. III. Tailoring, June, 1917. 7 pp. No. IV. Agricultural motor tractor work in England and Wales. July, 1917. 6 pp. No. V. The furniture trade. September, 1917. 18 pp. No. VI. Leather goods trade. September, 1917. 8 pp. No. VII. Hand-sewed boot and shoe making and boot and shoe repairing. 1917. 12 pp. London, 1917.*

All of these reports were prepared on behalf of the employment department of the Ministry of Labor, the first four being issued in collaboration with the War Pensions, etc., Statutory Committee, and the last three in collaboration with the Ministry of Pensions. Nos. I to IV were noted in detail in the MONTHLY REVIEW for December, 1917, pages 72 to 78. No. V explains the processes involved in furniture making and the disabilities compatible with each process; the length of training required; the wages and prospects in the trade; and includes a syllabus of instruction for the disabled during the course of training. No. VI deals with such leather work as is not subsidiary to other trades. It includes prospects and suitability for the disabled of trunk making and the fancy leather goods trade. The section on training discusses the nature and length of training, courses offered, and wages received during training and after. No. VII discusses the suitability for the disabled man of hand-sewed boot and shoe making and boot and shoe repairing, taking up the processes involved, the prospects and the training necessary, and including a syllabus of instruction for workshops and for schools offering training in this trade.

—— *Ministry of Munitions. Health of Munition Workers Committee. Memorandum No. 19, a second appendix to Memorandum No. 3 (Industrial canteens). Investigation of workers' food and suggestions as to dietary. Report by Leonard E. Hill, M. B., F. R. S. (revised edition). October, 1917 [Cd. 8798]. 12 pp. Price, 2d. net.*

—— —— —— *Memorandum No. 20. Supplementary to Memorandum No. 5 (Hours of work). Weekly hours of employment. London, October, 1917. [Cd. 8801]. 7 pp. Price 1d., net.*

This memorandum is reprinted in full on pages 82 to 87 of this number of the MONTHLY REVIEW.

—— *Ministry of Pensions. The War Pensions Gazette. A monthly journal for war pensions local committees, and for all interested in their work. Nos. 1–7. May-November, 1917. London, 1917. Price, 1d.*

This publication is devoted to the work for disabled soldiers now centralized under the control of the Ministry of Pensions. In the foreword in the first issue, Mr. George H. Barnes announces it as "a journal which will be devoted to their interests and which will aim at the diffusion of accurate information of the best that is being done for them and the promotion of their treatment and training and general welfare."

Regular departments cover certain phases of the work each month. Under "Local committees at work" the operations of the committees located at Leicester, Manchester, county of Haddington city of Birmingham, the borough

of West Ham, the borough of Swansea, and the county of Dumfriesshire have so far been reviewed with special reference to such matters as organization, cooperation, disablements, training, treatment, and employment.

Under "The treatment and training of the disabled" accounts are given of the purposes and methods of hospitals and schools for treatment and reeducation, among which are the Cordwainers' Technical College, offering courses in hand-sewed boot making and in the manufacturing of fancy leather goods; the Pilkington Special Hospital at St. Helens, which is physiotherapic in character; Queen Mary's Convalescent Auxiliary Hospitals, Roehampton, presenting a variety of technical courses ranging from bookkeeping to poultry farming; and the Military Orthopedic Hospital, at Shepherd's Bush, with its curative manual workshops. Under this heading there appears also an account of the interallied conference held in Paris in May, 1917; and a report on training courses for British prisoners of war in Switzerland.

An important feature of the journal is a department devoted to answers to correspondents. Points of difficulty which appear to be of general interest are dealt with, the rulings and decisions published being official.

Under "Notes of the month" attention is directed to official circulars, regulations, and decisions of general interest to local committees.

A department headed "Pensions in Parliament" deals with "Alternative pensions," "Separation allowances," "Disablement," "Medical treatment," and related subjects.

Besides the regular departments there are special articles on such subjects as "Publicity," "Training and trade-unions," "Pensions in Germany," "The employment of deaf and dumb workmen during the war," "A list of industries considered ordinarily unsuitable for training," "Agriculture," "A ministry of restoration," "National health insurance," "The disabled in Italy," "Report of the committee on institutional treatment," "The children," "Arificial limbs," and "A school of lamp working." "The need for reality," by John Galsworthy, in the July number, calls attention to the necessity of encouraging the disabled soldier to consider his future and avail himself of the opportunity for professional reeducation in order that he may compete with the able-bodied worker rather than take advantage of the present abnormal demand for his labor and accept a situation which he will not be able to keep under normal industrial conditions.

GREAT BRITAIN.—*Parliament. The parliamentary history of conscription in Great Britain: Being a summary of the parliamentary debates, etc., with an index and text of the military service acts and a preface by Richard C. Lambert, M. P. London, Allen and Unwin, 1917. 367 pp.*

The story of the British parliamentary struggle for conscription, down to the passing of the Military Service Acts, 1916.

—— *War Pensions, etc., Statutory Committee. Report for the year 1916. London, 1917. 12¼ pp. Price, 1s. 3d. net.*

This report gives an account of the purpose and work of the statutory committee which was "constituted for certain purposes relating to pensions, grants, and allowances made in respect of the present war to officers and men in the naval and military service of Your Majesty, their wives, widows, children, and other dependents, and the care of officers and men disabled in consequence of the present war and purposes connected therewith * * *" from its first meeting on June 17, 1916, to its dissolution. The functions and work of local committees and subcommittees established by the statutory committee are described, and details and statistics given under such headings as "Finance," "Pensions, grants, and allowances," "Education of children," "Special dis-

ablements subcommittee," "Treatment," "Training," "Employment." An important feature of the report is the account of the establishment of the Ministry of Pensions and of the proceedings of the statutory committee from December 31, 1916, until its dissolution and the transference of its functions and staff to the Ministry of Pensions on August 21, 1917. The latter three-fourths of the report consists of an appendix made up of extracts from circulars of an informational and administrative nature, including schedules and tables relating to the work of the statutory committee and the local committees.

GREAT BRITAIN—*(Scotland).—Local Government Board. Twenty-second annual report, 1916. London, 1917. xlii, 19 pp. Price, 3d. net.*

Gives the number of poor of all classes, including dependents, in receipt of relief on May 15, 1916, as 95,857 or 19.87 per 1,000 of the estimated population at June, 1916; and states that the expenditure for the benefit of those people amounted to £1,324,241 ($6,444,418.83). The number of poor in 1915 was 103,072 and the expenditure amounted to £1,237,004 ($6,019,879.97). Under the Old Age Pensions Acts of 1908 and 1911, 1,969 applications were received during 1916, 1,814, together with 112 carried over from the preceding year, being disposed of by December 31. The report notes that considerable work was added to the duties of the board by reason of the decision of the Government to grant an additional allowance of 2s. 6d. (60.8 cents) a week to old-age pensioners suffering special hardship from the high prices of food and from other economic conditions arising from the war. Referring to the work under the Unemployed Workmen Act, 1905, the report says: "Owing to the great scarcity of labor available for general industrial purposes, unemployment in Scotland has virtually disappeared. Two distress committees, however—Glasgow and Aberdeen—found it necessary to afford relief in a limited number of special cases. The Glasgow committee employed an average daily number of 10 persons in general farming work and the manufacture of moss litter, etc., * * * and in Aberdeen an average daily number of 12 persons were occupied in the collecting and sorting of waste paper."

IRELAND.—*Registrar General. Fifty-second annual report, containing a general abstract of the numbers of marriages, births, and deaths registered in Ireland during the year 1915. London, 1916. 73 pp. Price, 1s. net.*

ITALY.—*Cassa Nazionale d'Assicurazione per gl'infortuni degli operai sul lavoro. Per la riforma della legge infortuni. Rome, 1915. 391 pp.*

A compilation of proposals for the amendment of the existing workmen's accident insurance law. The first part of the volume gives official proposals, grouped under the following four headings: (1) Proposals by the division chiefs of the main office of the national accident insurance fund (*cassa nazionale*) and by the chiefs of branch offices; (2) proposals of the medical advisory board; (3) proposals of the executive committee; and (4) proposals of the Superior Labor Council. The second part gives a bibliography of Italian and foreign accident insurance legislation, general and special monographs on workmen's accident insurance reform, international congresses on social insurance, and of resolutions relating to accident insurance adopted by congresses and conventions. Statistical data on permanent disability and the capitalized value of pensions are given in an appendix.

The principal reforms proposed are the following: Extension of the classes of workmen subject to insurance; abrogation of the limitation of obligatory insurance to establishments employing at least five workers; more precise indication of the industries subject to insurance; consideration of trade diseases as industrial accidents; designation of the national accident insurance fund as sole authorized carrier of workmen's accident insurance; substitution of pensions

for lump-sum settlements in case of permanent invalidity; increase of indemnities for serious permanent disability; more precise definition of the basic and annual earnings of the insured; obligatory medical arbitration in case of disputes relating to the amount of compensation.

ITALY.—*Cassa Naziona e d'Assicurazione per gl'infortuni degli operai sul lavoro. Rassegna di assicurazioni e previdenza sociale. Bolletino mensile. Vol. 4, No. 4. Rome, April, 1917.*

The April, 1917, number of the monthly bulletin of the National Accident Insurance Fund contains among other matter the text of a circular relating to the liquidation of accident indemnities to workmen employed in military service in the war zone, of another circular on obligatory arbitration of disputes relating to accident insurance of workmen employed in the war zone, and of a third circular relating to the wages of war prisoners employed by public administrations and private parties and the accident insurance of these prisoners. Considerable space is devoted to the reproduction of the discussion by the Senate of a bill for "the protection and aid of war invalids." The full text of a bill for the obligatory insurance of agricultural workmen is also given.

The only statistical data contained in the present issue show the number of workers insured in the national fund against accidents, by sex, for the years 1914, 1915, and 1916. These data are reproduced here in the following table:

NUMBER OF MALE AND FEMALE WORKERS INSURED IN THE ITALIAN NATIONAL ACCIDENT INSURANCE FUND AGAINST ACCIDENT, 1914, 1915, AND 1916.

Year.	Males.		Females.		Total.
	Number.	Per cent.	Number.	Per cent.	
1914	682,216	89.36	81,242	10.64	763,458
1915	653,939	89.97	72,920	10.03	726,859
1916	580,922	86.28	92,347	13.72	673,269
1914–1916	1,917,077	88.61	246,509	11.39	2,163,586

The above data indicate a large increase in 1916 in the employment of female labor as compared with 1915.

—— ——. *Testo unico della legge per gli infortuni degli operari sul lavoro 31 gennajo 1904 e regolamento per la esecuzione del testo unico predetto. Rome, 1915. 182 pp.*

This volume contains the text of the Italian workmen's accident insurance law of January 31, 1904, and of the regulations for its enforcement and application as well as tables for the computation of compensations payable to survivors of insured persons.

NEW ZEALAND.—*Board of Trade. First annual report. Wellington, 1917. 26 pp.*

In accordance with the Cost of Living Act of 1915, the Board of Trade presented this, its first annual report, to the governor general to be laid before the General Assembly. The report covers a period from the inception of the board, March 1, 1916, to March 31, 1917, and gives the results of its investigation of high prices and related questions. A summary of the report on flour, butter, and meat will be found on pages —— to —— of this issue of the MONTHLY REVIEW.

—— *Department of Labor. Twenty-sixth annual report, 1917. Wellington, 1917. 21 pp.*

During the year 1916–17, 2,966 persons were assisted through the men's employment bureaus, a decrease of 3,012 (50.4 per cent) from the preceding year.

In 12,455 factories the number of workers was 78,188, a decrease of 4,823, or 5.8 per cent, from the preceding year, which is "evidence of the effect of the withdrawal from civil employment of a large number of men for defense purposes." The report states that the overtime worked by females and boys (no record having been made of overtime worked by males over 16 years of age) in 15 principal towns amounted to 489,374 hours as compared with 432,250 hours during the year 1915–16. The boot and shoe trade was responsible for 32,178 hours (about 6.6 per cent) of overtime. The overtime in munition works amounted to less than one-half of that worked during the preceding year—16,339 as against 41,534 hours. A total of 1,171 accidents (5 fatal) is recorded, an increase of about 10 per cent over the preceding year. During the year 37 cases were dealt with under the workmen's compensation act, as compared with 52 during 1915–16. The commissioners and councils of conciliation were instrumental in settling, or substantially settling, 159 out of 190 disputes. Appended to the report is a statement by the deputy superintendent of workers' dwellings relating to the operations of the act during the year ending March 31, 1917.

RUSSIA.—*Senate. Sobranie Uzakonenii i Rasporyazkenii Pravitelstva, Izdavaemoe pri Pravitelstvuyushchem Senate. September 1, 1917. No. 209. Part 1.*

This is a collection of governmental decrees and orders promulgated by the Russian Senate, June 30 to August 5, 1917. Decree or order No. 1327 provides for the settlement of industrial disputes by recourse to conciliation. Failing to reach a settlement through this, a board of arbitration is appointed. The board is to consist of an equal number of delegates selected from employers and employees.

SPAIN.—*Instituto de Reformas Sociales. Sección Primera. Legislación del Trabajo. Apéndice undécimo, 1915. Madrid, 1916. 374 pp.*

This volume, in connection with the 10 previously issued under the same title, forms a complete code of labor laws in force in 1915. Proposed laws and amendments presented to the National Congress during the year 1915 are reproduced.

The laws are presented in part 1 under the following titles: I. Industrial accidents; II. Agricultural; III. Associations; IV. Labor contracts; V. Cooperation; VI. Industrial education; VII Laborers' dwellings; VIII. Strikes; IX. Labor inspection service; X. Women and children; XI. Deposit and loan funds; XII. Saving funds; XIII. Agricultural associations; XIV. Other laws. In part 2 are given proposed amendments relative to: I. Associations; II. Labor contracts; III. Hours of labor; IV. Women and children (protection of infants); V. Saving funds; VI. Other amendments.

—— —— —— *Legislacion sobre asociasión. Madrid, 1916. 223 pp.*

A compilation of the more important provisions of the laws and orders and interpretations of legislation relative to associations of a social character in Spain, and more especially those of interest to laborers, cooperative societies, and agricultural credit associations.

The subject matter is classed as follows: A. Laws and regulations; B. Explanations and interpretations of laws and regulations.

Under each of these general heads the laws are divided into the following five classes: I. Associations in general—laborers' associations; II. The right of associations to representation in central bodies; III. Mutual aid and cooperative societies; IV. Credit societies; V. Other associations.

Laws enacted since February 1, 1916, are inserted as an appendix.

SPAIN.—*Instituto de Reformas Sociales. Sección Primera. Legislación sobre Accidentes del Trabajo. Madrid, 1916. 215 pp.*

A compilation of laws relative to industrial accidents. The volume is divided into two parts: A. Laws and regulations; B. Explanations and interpretations. In part 1, which presents the laws, copious references are made to explanations and interpretations appearing in part 2.

—— —— —— *Legislación sobre Descanso Dominical. Madrid, 1917. 276 pp.*

This volume is a compilation of the laws relative to Sunday rest. It is divided into two principal heads: A. Laws and regulations; B. Explanations and interpretations. In part 1, reproducing the laws, copious references are made to royal orders interpreting the laws.

—— —— *Sección 3d. Técnico-Administrativa. Coste de la Vida del Obrero. Estadística de los precios de los artículos de primera necesidad en toda España, desde 1909 a 1915. Madrid, 1916. 348 pp.*

This is a compilation of prices of principal articles of consumption in workmen's families from 1909 to 1915. The data used in this compilation were in general furnished semiannually by the mayors (alcaldes) of the various municipalities. Prices are reported separately for capital cities and other cities, towns, etc. The number of schedules received for each period covered, after the first, was from 6,000 to 7,000. Index figures have been computed for each province.

UNOFFICIAL.

ACKERMAN, FREDERICK L. *Our National Obligation: The story of England's collossal work in building workmen's houses as a prerequisite to maximum output of war munitions, and as a part of her program of social and economic reconstruction after the war. Washington, D. C., Journal of the American Institute of Architects, [1917] 52 pp. (Reprint from the December, 1917, issue of the Journal of the American Institute of Architects, Washington, D. C., and forming chapter IV of the serial article "What is a House?" which began in the October issue of the Journal.)*

Summarized in this issue of the MONTHLY REVIEW, pages 209 to 213.

ALDRIDGE, HENRY R. *The case for town planning: A practical manual for the use of councillors, officers, and others engaged in the preparation of town planning schemes. London, National Housing and Town Planning Council, 1916. 679 pp. Illustrated.*

An important work by the secretary of the National Housing and Town Planning Council, of Great Britain. In Part I the subject is dealt with from the historical point of view; "so far from town planning being a 'modern fad,' it is one of the oldest of the arts evolved in the slow development of organized civic life in civilized countries." It is further dealt with from the point of view of the officers responsible for the good government of a town, who can be persuaded to undertake such schemes only if it can be proved to their satisfaction that "public health will be improved, the amenities of life increased, and wise economy observed both in saving the money of the ratepayers and in expending it." Part II was written in response to a demand that the powers and duties of the Housing, Town Planning, etc., act of 1909, should be explained in a clear, simple, and concise way, and that the work of actual town planning administration, in its various stages, should be described in detail.

"From one point of view indeed the period in which this book is published is a specially favorable one. The sense of common citizenship was never greater than it is to-day, and proposals in regard to the improvement of the conditions under which the masses of the people live will receive warm support."

ALLEN, LESLIE H. *Industrial Housing Problems. Boston, Mass., Aberthaw Construction Company, [1917] 31 pp. Illustrated.*

Summarized in this number of the MONTHLY REVIEW, pages 208 and 209.

AMERICAN ASSOCIATION FOR LABOR LEGISLATION. *Review of labor legislation of 1917. The American Labor Legislation Review, Vol. VII, No. 3, New York, September, 1917. pp. 529–618.*

AMERICAN MINING CONGRESS. *Utah Chapter. Report on Insurance rates for mining and smelting under the workmen's compensation law of Utah, by I. M. Rubinow, Ph. D., to Utah Chapter, American Mining Congress. June 6, 1917. [Salt Lake City] 23 pp.*

A digest of this report will appear in a future issue of the MONTHLY REVIEW.

BAUER, STEPHAN. *Untersuchungen über die Lebenskosten in der Schweiz. Mit Beiträgen von E. Ackermann, P. Gross, W. Kaufmann, Jacob Lorenz und A. Menzi. (Schriften des Vereins für Sozialpolitik. Vol. 146, Part 1.) Munich and Leipzig, 1917. xxiii, 303 pp.*

At the end of 1913 Dr. Stephan Bauer, professor in the University of Basel and editor of the present volume, was charged by the German Social-Economic Society (Verein für Sozialpolitik), which at that time was conducting an international investigation on the cost of living and the movement of prices, with the duty of making an investigation of the same scope with respect to Switzerland. With the aid of pupils and collaborating friends Dr. Bauer expected to be able to publish the results of the Swiss investigation by the end of 1914. The outbreak of the war in 1914 and the consequent calling into military service or withdrawal from scientific work of several collaborators in the investigation deferred the realization of this expectation. A new problem, the enormous increase of prices during the war, had also arisen. When, therefore, the compilation of the results of the investigation was again taken up in 1917 it was considered very desirable that the two first years of the war be included in the investigation.

Dr. Bauer states that, for various reasons, an investigation including all cantons of Switzerland and conducted on uniform principles was out of the question, but that the collection of monographs contained in the present volume forms a good substitute for such an investigation. First, because the volume contains the results of a mass investigation of prices through cooperative stores in all parts of Switzerland. Secondly, because two monographs on household budgets, each of which covers a period of over 30 years, permit an insight into the movement of household expenditures. Compilations of the results of local investigations conducted in the city of Basel and in the canton Aargau are also given to produce a more complete picture of the trend of the cost of living in Switzerland. In a preface to the above monographs the author summarizes the data contained in them, and compares the cost of living data for Switzerland with similar data obtained in investigations relating to other countries.

BENOIST, CHARLES. *L'Organisation du travail. Tome premier, Paris, 1905. 493 pp. Tome deuxieme, Paris, 1914. 374 pp.*

These two volumes give a history of the development of labor during the last century and one-half in the light of political and economic conditions which the author claims have brought about what he calls "the crisis of the modern State;" and discuss industrial problems of the present. The first volume is divided into two parts: "Work, the mass, and the State," in which the mechanical and social conditions that have influenced labor are traced from the utilization

of steam in mechanics to the present; and "Investigations concerning labor in large industries," under which oil mines, metallurgy, mechanical construction, glass works, and textile industries are considered. The second volume, under the heading "'The species:' The workingman, the working class," discusses "Formation of the working class—the corporation and the old order." "The hierarchy of vocations in the old French society." "The rehabilitation of the mechanical arts," "The apology of labor as the apotheosis of the workman." "The man of 1848," and "The myth of the working class."

BITTARD, A. L. *Les écoles de blessés. Paris, 1916. 251 pp.*

An account of the work which had been done in the line of pensions, prosthesis, apprenticeship, and placement, up to the time of publication, for disabled soldiers of France, with the view of returning them to civil life. There are chapters on wounds and the wounded, recompense and pensions, functional reeducation and prosthesis, vocational reeducation, trades for the wounded, twenty months of scattered efforts, the creations of private initiative, the creations of municipalities and departments, the creations of the State, the school of the wounded, accidents and assurances, placement, general organization of vocational reeducation, the blind and the deaf, and the return to life. A valuable feature of the book is an appendix containing a list of the public services and the principal works and schools concerned with the vocational reeducation and placement of the wounded; a classified list of the principal vocations taught in the schools for the wounded; an outline of the conditions for admission to the centers for reeducation approved by the State; and the parliamentary documents concerning the work for disabled soldiers.

BUBNOFF, J. V. *The cooperative movement in Russia: Its history, significance, and character. Manchester (Eng.) Cooperative Printing Society, Ltd., 1917. 162 pp. Illustrated.*

"The first attempt in the English tongue to give a connected systematic survey of the cooperative movement in Russia," which movement—in spite of the absence of enactments legalizing and regulating it, in spite of "administrative interference and oppression"—has become a power to be reckoned with. The study covers agricultural Russia; the various forms of organization of the cooperative movement; institutions for its promotion and assistance; unions, associations, and banks; effects of the war; international tendencies; and other aspects.

CALHOUN, ARTHUR W. *A social history of the American family from colonial times to the present. Vol. I: Colonial period. Cleveland, Arthur H. Clark Co., 1917. 348 pp. Bibliography.*

The first of three volumes designed to develop an understanding of the forces that have been operative in the evolution of family institutions in this country. "In general, the colonial family is presented as a property institution dominated by middle-class standards, and operating as an agency of social control in the midst of social order governed by the interests of a forceful aristocracy which shaped religion, education, politics, and all else to its own profit."

CALIFORNIA STATE FEDERATION OF LABOR. *Preamble, constitution, and rules of order, as amended at 18th annual convention, held at Sacramento, Cal., October 1–6, 1917. San Francisco, 1917. 24 pp.*

—— *Proceedings of 18th annual convention, Sacramento, October, 1917. 118 pp.*

Includes a report on the labor legislation of the year, and a compilation of the dates of harvesting crops in the various sections of the State which indicates the possibility of organizing seasonal laborers and having them "follow up" the harvesting. The number of organizations in good standing in the Federation is given as 519, with a total membership of 71,500 persons.

CARREL, A. AND DEHELLY, G. *The treatment of infected wounds. New York, Paul B. Hoeber, 1917. 238 pp. Illustrated.*

The researches dealt with in this book were made in France by Dr. Henry D. Dakin and Dr. A. Carrel. They were begun late in December, 1914, and "from May, 1915, it became evident that wounds treated after a certain method by the aid of hypochlorite or the chloramines of Dakin were sterilized, without any harm resulting to the tissues or the patient. From that date it has been possible to prevent, in the greater number of cases, infection of wounds, and to abolish, almost entirely, suppuration in hospitals." The importance of this may be gathered from the fact that the examination of a large number of amputations in a French hospital showed that about 70 per cent of the operations were necessary because of infection and were not due to the extent of the original injury.

In this volume "Carrel's method" is described in minute detail. In their introduction the authors make this statement: "The application of these principles constitutes a 'method,' that is to say, an entity, no portion of which should be altered at random. The deplorable results obtained in several hospitals by surgeons who believed they were using our methods, but who, in reality, were altering them according to their fancy, make clear the necessity for observing exactly the directions which will be laid down in the following pages. The best way to learn the method is to see it applied. Hence this book is especially intended to recall essential details of the technique to those who already know something of its application."

The extreme importance of this strict adherence to the technique is emphasized by Sir Anthony A. Bowlby, surgeon general, British Army Medical Service, who contributes an introductory note, and again by the authors at the close of the book, as follows:

Neither the preparation of Dakin's solution may be modified, nor the processes for mechanical and chemical cleansing of wounds. It is indispensable to learn the method before attempting to apply it, and this apprenticeship demands several weeks, even from an experienced surgeon. But we can be quite sure that, applied in their entirety, the methods just described will produce the desired results. Admitted, their use exacts more precision and more care than the old methods, for any approach toward technical perfection requires more elaborate apparatus and a more specialized staff. But efforts of no great magnitude on the part of doctors and nurses will most certainly yield an immense improvement in results. The Nation has the right to ask from the medical corps that progress in the treatment of the wounded which is so acutely needed.

For formulas of Dakin's solution and discussions of its use, see MONTHLY REVIEW for November, 1917, pp. 173 to 178.

CHAMBER OF COMMERCE (PHILADELPHIA). *The Educational Committee. Eleven pamphlets. Thrift: A short text book for elementary schools of Philadelphia, 15 pp. Trust companies in Philadelphia, 7 pp. The rug and carpet industry of Philadelphia, 16 pp. The locomotive industry in Philadelphia, 11 pp. Truck farming in Philadelphia County, 12 pp. The candy-making industry in Philadelphia, 15 pp. Milk and its distribution in Philadelphia, 12 pp. Telephone, telegraph, and wireless systems in Philadelphia, 17 pp. The manufacture, distribution, and use of gas in Philadelphia, 61 pp. Department stores of Philadelphia, 11 pp. The paint and varnish making industry in Philadelphia, 29 pp. Philadelphia, Pa. [1917].*

EMPLOYERS' FEDERATION OF NEW SOUTH WALES. *Report of annual meeting, 15th November, 1917. Sydney, Offices of the Federation, 1917. 32 pp.*

Report of the fifteenth annual meeting of this federation. Includes the resolutions passed at the eighth annual conference of the various employers' federations of the Commonwealth, a table of anti-strike legislation throughout

Australasia, and a comparison of the number of strikes in New South Wales before the war and since. During the year 1913 there were 134 strikes, involving 40,011 persons, and during the year ending in September, 1917, a total of 330 strikes, involving 157,756 persons. The address of the president of the New South Wales federation, covering more than eight pages, affords a survey of industrial conditions from the standpoint of the employer.

EPSTEIN, ABRAHAM. *The Negro Migrant in Pittsburgh. A study in social economics. Published under the supervision of the school of economics, University of Pittsburgh. Pittsburgh, 1918. 75 pp. Illustrated. Price, 50 cents.*

See pages 155 to 157 of this issue of the MONTHLY REVIEW for an extended summary of this report.

HOBSON, S. G. *Guild principles in war and peace. London, G. Bell & Sons, 1917. 176 pp.*

These essays, reprinted from various sources, present the arguments and considerations that have impelled the author to advocate the abolition of the wage system and the formation of national guilds. "A national guild is the combination of all the labor of every kind, administrative, executive, and productive, in any particular industry. It includes those who work with their brains and those who contribute labor power." The fundamental idea of the guilds is "that they shall exercise full control over labor and enjoy complete autonomy in all industrial transactions."

The book is largely devoted to a critique of the Garton Memorandum, described by Mr. Hobson as "the most representative document issued on the industrial situation." The editor of The New Age, with which publication the author is associated, contributes a 14-page introduction on the subject of unemployment, Mr. Hobson making the assertion that "after the war we can not escape from a dreadful and probably a prolonged period of acute unemployment."

HOXIE, ROBERT FRANKLIN. *Trade-unionism in the United States. New York and London, Appleton, 1917. 426 pp.*

"The book here presented is the result of an effort to reproduce as faithfully as possible the notes and lectures on trade-unionism used by Robert F. Hoxie during his last year of teaching in the University of Chicago, and to combine them with some of his chapters previously published." Great care has been put into the preparation of the volume by friends who knew that Prof. Hoxie had looked forward to the writing of a book on trade-unionism as the main work of coming years.

In his very able introduction, Mr. E. H. Downey makes the statement that, like all social movements which excite the hopes and fears of men, trade-unionism has more often been the object of passionate denunciation or defense than of scientific inquiry; few persons have brought forth from patient research even a partial interpretation of it in causal terms, and among this elect number Prof. Hoxie will hold "a high and secure place."

MAWSON, THOMAS H. *An imperial obligation: Industrial villages for partially disabled soldiers and sailors. London, Grant Richards, 1917. 124 pp. Illustrated.*

A scheme for the establishment of industrial villages for disabled soldiers and sailors and their families, the occupations to be confined to one industry to a village but divided among home, shop, and factory workers. It is suggested that the production be encouraged of articles heretofore imported from enemy countries, such as pencils, office furnishings, toys, chemical preparations,

and bulbs and decorative nursery stock. Around a center already supporting a dominating industry might be established villages to follow the trades and crafts subsidiary thereto.

The method of control proposed is that of committees—central, district, and village; for organization purposes there has been formed "The Industrial Villages Interim Committee," with offices in London. It is recognized that the work must be begun on a subsidized or semiphilanthropic basis, but the villages are expected to become entirely self-supporting.

The appendixes to the book include a synopsis of its contents, a description of Lever Bros.' copartnership scheme, and several articles on the reeducation of the disabled by various existing agencies.

MILLS, FREDERICK C. *Contemporary theories of unemployment and of unemployment relief. New York, Longmans, Green & Co., and London, P. S. King, 1917. 178 pp. Bibliography. Columbia University Studies in History, Economics, and Public Law, No. 183.*

"So far as has been possible the work has been held strictly to a study of theories as to the causes of the modern phenomena of unemployment and as to the methods by which unemployment can be prevented or relieved. Facts concerning the extent of unemployment have been touched upon only where they have a bearing upon either of these two subjects."

The author groups his material according to the development in England and in the United States of unemployment theory and remedial practice, and contemporary theories of unemployment and of its relief in the same countries. A brief compendium of the course of tramp and vagrancy legislation in the United States is included.

M. S. *Domestic service: by an old servant. Boston and New York, Houghton Mifflin, 1917. 111 pp.*

"Written by an old servant who must speak of domestic service as it has been to her 52 years of her life."

MURRAY, MARR. *Drink and the war, from the patriotic point of view. London, Chapman and Hall, 1915. 156 pp. Price 1s.*

Written to the text "The nation that will win the next war will be the one which is the most sober"—a statement by the Kaiser.

NATIONAL HOUSING ASSOCIATION. *Housing problems in America. Proceedings of the sixth national conference, Chicago, October, 1917. 462 pp.*

A brief report of the proceedings of this conference appeared in the MONTHLY REVIEW for December, 1917, pp. 215 to 218. The present volume gives the papers and discussion in full, and includes several valuable contributions on the subject of industrial and war-time housing, of such immediate importance in various sections of the country.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Analysis of British wartime reports on hours of work as related to output and fatigue. Number 2, November, 1917. 15 Beacon Street, Boston, 1917. 57 pp.*

As announced in the foreword, the National Industrial Conference Board has deemed it advisable, because of the timeliness and importance of the experience of Great Britain with the hours of labor problem, to publish this analysis of reports of certain British commissions and investigators on the efficiency and health of industrial workers under wartime conditions. This analysis is intended to be somewhat critical, but an effort has been made to avoid all expressions of opinion which might anticipate or prejudice the results of the board's broader inquiry into the relation of hours of labor to industrial efficiency, with special reference to the health and safety as well as to

the output of workers. The reports of the British Health of Munition Workers, to which reference is made in this pamphlet, have been noted from time to time in the MONTHLY REVIEW.

NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR. *Bureau of Home Economics. Food for the family. Publication No. 120. New York, 1917. 15 pp. Price, 5 cents.*

A leaflet suggesting the meals best suited to growing children and giving recipes for the unfamiliar dishes.

PHELPS, EDITH M., ED. *University debaters' annual: Constructive and rebuttal speeches delivered in debates of American colleges and universities during the college year 1916–17. New York, H. W. Wilson Co., 1917. 272 pp.*

This volume, the third of its series, contains speeches on Government ownership of railroads, universal military service, compulsory arbitration of railroad labor disputes, Chinese and Japanese immigration, compulsory arbitration [in general], and progressive inheritance tax.

ROTHBAND, HENRY L. *Employment for disabled soldiers. A scheme for a national roll of employees. [Manchester, Eng., 1916.] 72 pp.*

——— *The Rothband employment scheme for sailors and soldiers disabled in the war. [Manchester, Eng., 1917.] 51 pp.*

Mr. Rothband, a Manchester manufacturer, proposes a Royal appeal by the King or the Prince of Wales, to all employers of labor, inviting them to promise permanent employment for one or more disabled soldiers. The earlier report summarizes the argument for Mr. Rothband's plan and narrates its history from its inception, in March, 1915, through the year 1916. Opinions of various prominent public men are included. The 1917 report, which is a continuation of the earlier one, describes the proposed development of the scheme, and its reception by local pensions committees, and discusses in detail the official objections to it.

SOUTHALL, A. E., ED. *Imperial Yearbook for Dominion of Canada, 1917–18. Third year. Ottawa, Mortimer Co., 1917. 637 pp.*

In addition to the usual great amount of statistical and other information, this volume includes a "war section" of 63 pages, with separate index.

VICTOR, E. A., ED. *Canada's future: What she offers after the war. A symposium of official opinion. Toronto, Macmillan, 1916. 320 pp.*

About 50 short articles on the advantages offered by Canada to the immigrant. A commendable feature is the footnotes which introduce the writers.

WEEKLY UNDERWRITER. *Live articles on accident prevention, No. 5. New York, Underwriter Printing and Publishing Co., 1917. 143 pp. Illustrated. Price $1.05.*

A series of articles reprinted from the monthly liability insurance supplement of The Weekly Underwriter, 1916–17. Includes The shipbuilding industry, by Robert H. Pearson, consulting engineer, and Safety in explosives manufacturing, being the rules established by the departments of labor of Pennsylvania and New Jersey, effective April 1, 1917.

WOOD, T. B. *The national food supply in peace and war. Cambridge (England), University Press, 1917. 43 pp. Price 6d. net.*

The author of this pamphlet was a member of the food (War) committee of the royal society, which made an investigation, at the request of the Board of Trade, of the food supply of Great Britain before the war. The present study is in two parts, dealing with the food supply before the war and in time of war, and has been prepared that the general public may form a fair estimate of the "admittedly difficult situation." Part II includes an estimate of the requirements and of the foods available for 1917–18, deals with sources of supply, distribution, diversion, etc., and suggests a policy of control based on the fact

"that the prices of agricultural commodities are mutually related and that their relationships are susceptible of investigation," which investigation should be the basis of price fixing. There are several important tables giving origin, distribution, consumption, food values, requirements, and other figures.

WORKMEN'S COMPENSATION PUBLICITY BUREAU. *Digest of workmen's compensation laws in the United States and Territories, with annotations. Fifth edition, revised to December 1, 1917. F. Robertson Jones, compiler, 80 Maiden Lane, New York, 1917.*

This digest covers all the compensation laws enacted to date, including the new and amended acts passed in 1917. It contains a tabular synopsis of the principal provisions of the laws arranged in the same form as the preceding editions except that the citations of cases, formerly included in the table, are now grouped separately in a second table. Two new captions, "occupational and other diseases" and "evidence and proof," have been added; while one provision, "employments in interstate commerce," has been omitted in view of the decision of the United States Supreme Court in the Winfield cases, which declared that States had no jurisdiction over accidents sustained in interstate commerce.

MONTHLY REVIEW

OF THE

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COST OF LIVING IN THE DISTRICT OF COLUMBIA.

SIXTH ARTICLE—WAGE-EARNING WOMEN: FOOD, HOUSING, AND SUNDRIES.

The preceding article of this series discussed the clothing expenditures of wage-earning women in the city of Washington as developed in the present investigation. It also sought to bring out, in a very general way, the expenditure necessary, for a working woman in that city, to maintain a condition of dress that would meet the tests of physical comfort, social decency, and agreeable outward appearance.

An analysis, along quite similar lines, may be made as regards the expenditures for food and lodging. In the following brief presentation of the results of the present study on this subject, it must be borne in mind that the investigation was made in the spring of 1917. In the months since then, as a result of the great influx of people into the District of Columbia combined with the general rise in prices, there have been very general and very marked advances in the cost of rooms and meals. To just what extent this has affected the housing conditions of the women included in this study is not known. But, in a general way, it is known that, for many of them at least, wages did not increase as rapidly as rents and prices, and, as a result, for practically all wage-earning women in Washington the problem of food and lodging is now an even more serious one than it was 8 or 10 months ago.

VARIOUS METHODS OF LIVING.

Of the 600 white wage-earning women covered by the present study, 414 were living at home with their immediate families, all but 51 of these living with parents. The remaining 186 lived away from home, either in private families, in commercial boarding houses, in working girls' homes, or were housekeeping on their own account.

In certain employments the number of women living away from home was proportionately much greater than in others. Thus, of the 12 waitresses scheduled only 2 were living at home, whereas 29 of the 38 telephone girls were so living. Among store employees about one-third were living away from home. The distribution, on this

point, of the 600 women scheduled, is shown in the following table, which also classifies these women by marital condition:

TABLE 1.—LIVING CONDITIONS AND OCCUPATION.

	Total.	At home.	Away from home.				
			Total.	Private families.	House-keeping.	Boarding houses.	Institutions.
Single	542	399	143	72	31	23	17
Married	58	15	43	12	27	2	2
Total	600	414	186	84	58	25	19
United States	63	33	30	15	8	4	3
Office	172	140	32	14	8	7	3
Store	192	133	59	30	11	10	8
Telephone	38	29	9	6	2	.....	1
Factory	95	63	32	12	18	1	1
Waitress	12	2	10	2	5	3	.....
Laundry	28	14	14	5	6	.....	3
Total	600	414	186	84	58	25	19

As regards the 414 women living at home little can be said as to the character or cost of their food and lodging. Often such women were assisted by their families and paid only a nominal board. On the other hand, such women were often supporting their families in whole or in part and turning in all their surplus money to the general family fund. In practically all cases of women living at home, therefore, the amount paid to the family was not determined by commercial reasons and was not a measure of the accommodation received in return.

In the case of women living away from home, board and lodging are usually placed upon a strictly business basis, but not always even then. The strict commercial relationship is most clearly marked in the case of the usual boarding house, where the payments by the boarders must cover all expenses of maintenance. The financial basis is also clearly marked in the case of a woman who is doing housekeeping on her own account, renting a room or rooms and preparing her own meals. In case of board in a private family the personal factor sometimes enters. The family may charge less than the market price because of friendship or relationship or simply for the sake of companionship. In the case of working girls' homes the rates charged are usually below what they would be if the homes were conducted on a commercial basis, and very often the rates are fixed not upon cost but upon the earnings of the girls.

The woman living away from home has the choice of four alternative ways of living. These, as noted, are: With private families, in commercial boarding houses, housekeeping in one or more rooms, and living in homes established for working girls. Certain combinations

of these methods are possible but in practice were found not to be frequent.

Each of these ways of living has its merits and demerits. The cheapest accommodation is found in those working girls' homes in which the rates are in proportion to the earnings of the girls. But, aside from the objections that many women have to such homes, the total accommodation of all such establishments in Washington is too small to have much influence upon the situation.

Housekeeping—i. e., renting a room or rooms and getting one's own meals therein—was preferred by many women because such a method of living may be made most to approximate a true home. Married women appeared particularly favorable to this form of living. Of the 43 married women not living at home 27, or nearly two-thirds, were housekeeping. This is probably explained by the fact that married women in most instances have had a taste of maintaining a home of their own and where possible prefer to keep on with it. A good many of them, also, have some equipment left from former housekeeping experiences as well as some practical experience to guide them on the way. Housekeeping, too, is undertaken by many women for reasons of economy. By cooking on a gas stove, or even a gas jet in one's room, and buying cheaply, the cost of food may be reduced to a minimum. The evil here is, of course, that not only is the food usually badly chosen but this form of living is conducive to an economy that may easily border on starvation.

THE COST OF LODGING AND FOOD.

Because of these varying methods of living and the absence of agreed-upon standards of adequacy in housing no precise conclusions can be drawn as to the cost of satisfactory food and lodging in the city of Washington; but by studying separately the actual living conditions of each of the four groups mentioned a fair idea may be obtained of the cost of food and shelter for a working woman in Washington. In doing so, a rough standard of adequacy is necessarily adopted. It is: A furnished room, occupied alone and adequately heated, sufficient palatable food to provide nourishment necessary for the work performed, and the use of sitting room to receive company.

A careful study of the experiences of the various women included in this study leads to the conclusion that $6 per week was the bare minimum upon which the average woman could obtain adequate board and lodging in Washington in the early part of 1917, and that a somewhat larger amount was necessary to insure any considerable degree of comfort. This was arrived at by an analysis of the actual amounts spent and the accommodations received by groups of women living in the four ways above mentioned—(1) private families, (2) boarding houses, (3) housekeeping, and (4) working girls' homes.

(1) Private families.

In considering the cost and character of the living accommodations of women living in private families, it seems best to limit attention to those who were boarding in families with which there was no close relationship, as such relationship often complicated the question of the commercial value of the living secured. Of the women covered by this study, 52 were without this limitation. In Table 2 are listed for each of these 52 women separately, her age, occupation, and income; also the amount paid for room and board, and a brief description of the character of the accommodation received for the money paid. The weekly rate shown was the rate paid at the end of the scheduled year and in some cases exceeded the weekly income. This meant that the individual in question was living, at that particular time, beyond her income.

Examination of this table shows clearly that the five cases where less than $4 per week was paid were abnormal. One woman worked three or four hours a day to help in paying for her board; another had all meals provided at her place of employment; a third shared a room with two other girls; a fourth had one meal furnished at place of employment besides sharing her room with the landlady; and a fifth both shared her room and helped with housework.

For the 18 women paying $4 and under $5 weekly, the living accommodations of only 3 were apparently devoid of defects. In the other cases the women either gave considerable help with the work, shared their rooms with others, had inadequate heat, or else had some meals furnished outside; in many cases a combination of these was operative.

Of the 14 women paying $5 and under $6, only 2 were apparently getting a fair standard of living.

Eleven women were paying $6 and under $8, and of these 6 had comfortable rooms and adequate board.

Thus it would seem safe to conclude that, although in exceptional cases room and board were obtained at a weekly cost of under $6, not until the $6 mark was passed could a woman under ordinary circumstances obtain fairly adequate living conditions in a private family.

TABLE 2.—COST OF ROOM AND BOARD IN PRIVATE FAMILIES.

Age.	Occupation.	Annual income.	Weekly rate for food and lodging.	Character of accommodation.
31	Saleswoman	$212.25	$1.25	In addition worked 3 or 4 hours a day.
22	Waitress	390.00	1.40	Received all meals at place of employment. Very small room.
18	Tailor work	274.00	3.00	Shared room with 2 other girls.
26	Cashier (office)	454.00	3.50	Received 1 meal at place of employment. Shared room with landlady.
22	Telephone	525.27	3.63	Shared room with cousin. Helped 30 minutes a day with housework.

TABLE 2.—COST OF ROOM AND BOARD IN PRIVATE FAMILIES—Concluded.

Age.	Occupation.	Annual income.	Weekly rate for food and lodging.	Character of accommodation.
26	Factory	$224.00	$4.00	Third-floor room. No sitting room in house. Bought many meals outside.
20	Office	329.00	4.00	Room insufficiently heated. Helped 30 minutes a day with housework.
20	Telephone	504.84	4.00	25-minute ride to work. Otherwise apparently satisfactory.
22	Factory	403.50	4.14	Very small room and very cold; shared with another woman.
27	Saleswoman	446.55	4.20	Lived with aunt. Helped 8 or 9 hours a week with housework.
29	.....do	775.50	4.30	Lived with friends. Shared room; 30-minute ride to work.
33	Waitress	712.37	4.38	Received 2 meals a day at place of employment. Shared room.
30	Saleswoman	297.00	4.50	Shared small room with daughter of landlady.
24	Office	556.00	4.50	Apparently satisfactory.
23	.....do	585.00	4.50	Shared room with daughter in family. Helped with dishes at night.
25	Saleswoman	545.50	4.60	Lived with aunt. Shared room. Helped some with housework.
22	Telephone	437.00	4.62	Insufficient heat. Lived with friends and helped 8 hours a week with housework.
24	United States (Bureau of Engraving and Printing).	542.65	4.62	Shared room. Helped 1 hour a day with housework; 35-minute ride to work.
29	.....do	547.20	4.62	Shared room. Helped 30 minutes a day with housework; 30-minute ride to work.
50	Factory	428.25	4.63	Shared room with landlady. Furnished own bed and rug; 45-minute ride to work.
33	.....do	447.00	4.71	Lived with cousin. Shared room; 30-minute ride to work.
27	United States (clerk)	787.16	4.80	1-hour ride to work. Otherwise satisfactory.
33	Office	523.50	4.90	Lived with cousin. Helped 30 minutes a day with housework.
28	Factory	388.50	5.00	Shared room with 2 others. Helped some with housework. Did 2 weeks' dressmaking for family.
35	Saleswoman	500.00	5.00	Small, unheated room. Helped 6 hours a week with dishes. Took care of own room.
19	Office	491.00	5.02	Shared room; 25-minute ride to work.
32	United States (Library)	815.50	5.19	Apparently satisfactory.
36	Saleswoman	470.43	5.20	Lived with aunt. Helped 15 hours a week with housework; 45-minute ride to work.
20	United States (stenographer)	866.50	5.38	Lived with aunt. Helped some with work; 25-minute ride to work.
30	Saleswoman	492.37	5.40	Helped 30 minutes a day with housework.
42	.....do	614.00	5.45	Lived with friends. Apparently satisfactory.
17	Office	566.00	5.49	Shared room with another girl.
23	Laundry	336.25	5.50	Lived with mother-in-law. Shared room.
28	United States (Bureau of Engraving and Printing).	505.80	5.59	Lived with aunt. Shared room. Helped 30 minutes a day with housework; 30-minute ride to work.
28	Saleswoman	500.00	5.65	Shared room 12 weeks with dependent son.
27	United States (Bureau of Engraving and Printing).	540.15	5.73	Shared room. Insufficient heat.
29	.....do	541.60	5.84	Room insufficiently heated.
36	Saleswoman	420.00	6.00	Apparently satisfactory.
48	.....do	433.00	6.00	Insufficient heat.
39	.....do	781.50	6.00	One roommate.
20	Telephone	556.29	6.20	Lived with aunt. Shared unheated room. Helped 30 minutes a day with housework; 30-minute ride to work.
31	Office	785.00	6.28	Apparently satisfactory.
28	United States (Bureau of Engraving and Printing).	631.68	6.37	Shared room with landlady's two daughters. Insufficient heat. Helped 30 minutes a day with housework.
45	Saleswoman	867.00	6.47	One roommate; 30-minute ride to work.
34	.....do	719.00	6.64	Apparently satisfactory.
28	Office	605.00	6.85	Do.
40	United States (Bureau of Engraving and Printing).	749.84	7.02	Do.
34	.....do	784.00	7.06	Apparently satisfactory; 45-minute ride to work.
34	United States (stenographer)	1,010.00	8.00	Apparently satisfactory.
31	United States (Bureau of Engraving and Printing).	721.00	8.19	Apparently satisfactory; 30-minute ride to work.
33	United States (Library)	1,096.00	10.02	Apparently satisfactory; 40-minute ride to work.
35	.....do	1,014.00	11.66	Do.

(2) Commercial boarding houses.

Twenty-two of the self-supporting women visited were living in commercial boarding houses. The only ones who were paying under $4 per week were 3 waitresses, each of whom received at least two meals daily at her place of employment. Only 1 of the 5 women paying $4 and under $5, was even fairly comfortably situated, and in this case the neighborhood was undesirable; in the other 4 cases there were very definite drawbacks.

Five women were paying $5 and under $6 per week, and of these only 1 seemed to be getting a fair standard of living. The remaining 9 women were paying between $6 and $8 weekly, and not more than 4, or less than half, had comfortable rooms and adequate food.

In this group the line of demarcation is not distinctly drawn, but clearly satisfactory accommodations in commercial boarding houses could not be obtained, except in occasional instances, for less than $6 per week, and even at a weekly rate of from $6 to $8 comfortable food and lodging could not be assured.

Table 3 gives the details regarding the living conditions of this group of 22 women.

TABLE 3.—COST OF ROOM AND BOARD IN COMMERCIAL BOARDING HOUSES.

Age.	Occupation.	Annual income.	Weekly rate for food and lodging.	Character of accommodation.
20	Waitress	$367.50	$1.50	Received 3 meals daily at place of employment. Shared room with 3 sisters.
32	do	324.50	2.25	Received 2 meals daily at place of employment. Shared room with another girl.
21	do	491.00	2.38	Received 3 meals daily at place of employment.
21	Saleswoman	349.97	4.22	Took many of her meals with friends. Bought breakfast and lunch at store at reduced rate.
21	Office	469.83	4.24	One roommate. Helped 30 minutes a day with housework.
26	Saleswoman	480.48	4.55	One roommate.
19	do	423.50	4.75	Apparently satisfactory.
23	do	316.50	4.85	One roommate.
21	do	373.00	5.00	Very small, unheated room. No use of sitting room.
28	United States (Bureau of Engraving and Printing).	516.25	5.31	Apparently satisfactory.
24	Saleswoman	513.47	5.40	One roommate.
33	do	533.00	5.42	Not always sufficient heat.
36	United States (Bureau of Engraving and Printing).	547.75	5.73	One roommate. Thirty-minute ride to work.
35	Saleswoman	450.00	6.00	Very small room. No use of sitting room.
26	Office	711.00	6.15	Insufficient heat. One roommate.
42	Seamstress	407.00	6.39	No use of sitting room.
28	Office	575.00	6.50	One roommate.
29	United States (Bureau of Engraving and Printing).	584.32	6.55	Apparently satisfactory. Thirty-five minute ride to work.
35	do	620.00	6.78	Insufficient heat. Inconvenient to use sitting room.
40	Office	955.00	6.81	Unfurnished, but very large room.
24	do	539.00	6.97	One roommate.
32	Saleswoman	900.00	7.95	Small room. Insufficient heat.

(3) Housekeeping.

In this group are included all of the women visited who cooked at least one of their daily meals in their rooms or apartments. There were 54 self-supporting women coming within this group. Table 4 lists these 54 women according to the total weekly cost of room and meals combined.

The weekly costs among these women varied greatly—from $2.03 to $10.67. The tendency among the lowest-paid women living in this way seems to have been that of cutting down in every possible way on food in order to make the adjustments necessary to bring their expenditures within the range of their income. Thus, for the 13 women receiving an income below $300 per year who chose to live in this way the dominant reason was doubtless that of economy. On the other hand, many of the women in higher income groups prefer this method of living since it brings a greater independence and a place they can call their own.

In analyzing the rates paid it may be noted that there were only 3 with expenses below $3 a week and all 3 of these were provided with at least two meals a day at their place of employment. In the 8 cases of women with expenses of $3 and under $4 per week, 2 were furnished with extra meals, a third had free rent, another had a small room under the roof heated only by an oil stove, a fifth had a small, unheated room, a sixth had an unfurnished room which she heated with a gas stove, while the remaining 2 practically starved themselves in their efforts toward economy. Fourteen housekeeping women paid $4 and under $5 per week. Of these, 2 regularly had meals provided with their employment, 2 were invited out so much as to materially reduce their food expenditure; in 4 cases the rooms were unfurnished and in 4 cases the tenants had to provide their own heat. Of the remaining women who paid between $4 and $5, 2 lived with friends and 2 shared their apartments with relatives, paying a little less than half the total expense.

Of the 6 housekeeping women paying $5 and under $6 per week only 1 was able to provide adequate housing and food and she was sharing a 3-room apartment with her son. Sixteen women were paying $6 and under $8, and of these 13 were apparently comfortably situated, the majority sharing a small apartment with some friend or relative and sharing equally the expense. Thus, it seems quite evident that under normal circumstances at least $6 a week was necessary for a housekeeping woman to maintain the minimum of decent comfort even when the utmost economy was practiced. The weekly expenditure shown for food and room was the expenditure at the end of the scheduled year, and in some cases exceeded

the weekly income. This meant that, at that particular time, the individual in question was living beyond her income.

TABLE 4.—COST OF ROOM AND BOARD FOR WOMEN HOUSEKEEPING.

Age.	Occupation.	Annual income.	Weekly expenditure for food and lodging.	Character of accommodation.
29	United States (charwoman).	$240.46	$2.03	Earned two meals a day by extra work at hospital.
36	Waitress	551.00	2.81	Three meals a day six days a week received at place of employment.
24	do	440.00	2.82	Received two meals a day at place of employment.
65	Saleswoman	415.00	3.00	Free room in apartment of son-in-law.
49	Laundry	213.58	3.10	Shared room with daughter and grandson. No use of sitting room. Insufficient food.
59	Dressmaker	248.06	3.54	Room under roof, oil stove; one small window. No sitting room.
29	Saleswoman	258.00	3.57	Small, unheated room.
28	Waitress	339.00	3.68	Received two meals a day for 20 weeks and three meals for 26 weeks at place of employment.
36	Laundry	239.20	3.69	Went with insufficient food and clothing to care for children. No sitting room.
50	Factory	435.00	3.75	Received two meals a day while working 22 weeks as a dressmaker. No sitting room.
45	do	281.00	3.93	Unheated, unfurnished room. (Expenditure included price of fuel for stove.)
55	Laundry	253.33	4.00	Small, unheated room with friend. (Expenditure included price of fuel for oil heater.)
19	Saleswoman	323.00	4.00	One roommate. Shared small apartment with cousin, who paid a little more than half.
45	Factory	278.00	4.16	Small, unheated room. No sitting room. (Expenditure included price of fuel for oil stove.)
28	Office	726.50	4.42	Two roommates. Insufficient heat. Invited out to many meals.
49	Factory	361.00	4.50	Small, unfurnished room with friends.
32	Waitress	603.50	4.53	Shared three-room apartment with two other girls. Received two meals a day at place of employment.
22	do	336.00	4.58	One roommate.
27	Office	764.00	4.63	One roommate. Insufficient heat part of time. Invited out a great deal.
22	do	440.00	4.66	Shared three-room apartment with mother, who pays a little more than half.
21	Telephone	415.00	4.68	Large hall room with private family.
55	Dressmaker	394.00	4.73	Received lunch always where working and sometimes breakfast and supper.
55	Laundry	260.00	4.75	Unfurnished, unheated room. All clothing given second hand. (Expenditure included price of fuel for stove.)
35	Saleswoman	542.00	4.85	Unfurnished, unheated room. No sitting room. (Expenditure included price of fuel for stove.)
31	do	295.00	4.88	Unfurnished room with insufficient heat.
35	Laundry	238.10	5.00	Insufficient heat. (Oil stove.)
75	Factory	294.00	5.00	Unfurnished room in office building. No sitting room.
21	Saleswoman	261.91	5.05	Two roommates. No sitting room. (Gas stove for heating.)
45	Factory	409.00	5.08	Apparently satisfactory. Shared 3-room apartment with son.
58	do	385.75	5.11	No sitting room.
31	United States (Bureau of Engraving and Printing).	553.70	5.73	Insufficient heat. One roommate after July.
40	do	726.18	6.06	Insufficient heat. Two roommates.
55	Factory	410.00	6.15	No sitting room.
50	do	415.00	6.26	Apparently satisfactory. Shared apartment with daughter.
45	Saleswoman	618.00	6.61	Apparently satisfactory. Shared apartment with sister.
23	United States (Library)	520.00	6.79	Apparently satisfactory. Shared apartment.
26	Office	802.00	7.01	Apparently satisfactory. Shared apartment with mother.
26	do	681.00	7.04	Apparently satisfactory. Shared apartment with another girl.
45	do	550.00	7.06	Apparently satisfactory. Shared apartment with cousin who was partly dependent.
32	Saleswoman	603.65	7.14	Apparently satisfactory. Small apartment.
26	Laundry	595.60	7.18	Apparently satisfactory.

TABLE 4.—COST OF ROOM AND BOARD FOR WOMEN HOUSEKEEPING—Concluded.

Age.	Occupation.	Annual income.	Weekly expenditure for food and lodging.	Character of accommodation.
33	Telephone	$603.69	$7.52	Apparently satisfactory. Shared apartment with sister.
31	Office	765.00	7.55	Apparently satisfactory. One-room apartment with bath.
33	Saleswoman	782.00	7.60	Apparently satisfactory. Shared apartment with two sisters.
32	Factory	448.00	7.64	Unfurnished room nine months; apartment three months.
34	United States (Bureau of Engraving and Printing).	768.32	7.65	Apparently satisfactory. Shared apartment with two sisters.
35	do	546.11	7.88	Apparently satisfactory. Shared apartment. Thirty-five-minute ride to work.
29	Office	970.25	8.00	Apparently satisfactory. One-room apartment.
33	United States (operative)	716.42	8.16	Apparently satisfactory. Shared apartment with friend.
55	Factory	494.00	8.22	Four unfurnished rooms over store. Had to provide own heat.
55	do	683.50	8.92	Apparently satisfactory. Shared apartment with niece.
52	United States (clerk)	788.87	8.96	Apparently satisfactory. Shared apartment with daughter. Forty-five-minute ride to work.
54	Factory	600.00	9.12	Apparently satisfactory. Shared apartment with friend.
33	do	800.00	10.67	Apparently satisfactory. Two-room apartment alone.

(4) Working girls' homes.

Only 19 of the women scheduled were found to be living in working girls' homes. In the particular homes in which these women were living the rate for board and lodging was usually apportioned according to the wages received. Thus, the accommodation offered was usually considerably cheaper than could be obtained by these women in other places. That this form of living was so little availed of seems to have been due primarily to the fact that the total accommodation of such homes in Washington is very limited, as the homes in existence seemed to have been constantly full to capacity.

To determine this point with accuracy, a special survey of working girls' homes in Washington was made by the bureau in December, 1917, and a visit made to all of them with the exception of one which accommodated only 11 girls. In addition, a visit was made to the home recently established by the Telephone Co. for the accommodation of its operators brought in from other cities. This accommodates some 200 persons, but it is open only to telephone employees.

Excluding the Telephone Co.'s home, eight homes were found. The maximum number of persons they could accommodate was about 400.

Only two of these homes reported a majority of single rooms; the remaining 6 had nearly all double rooms and in several cases even three in a room. In two cases there were dormitories, each accommodating six women. All of the homes were heated by steam or

hot water except two, one of which had furnace hot-air heat, while the other had individual heating stoves. In all cases laundry privileges were allowed to some extent, but in only one place did the girls do all their own laundry, and in that instance they were charged a fee of 25 cents a month extra.

Sitting-rooms were provided in all these institutions and in most cases were very attractive, but in two instances were so cheerless that there could have been no pleasure in using them. Callers were allowed in all cases, with the requirement (except in two places) that they leave the building at a certain hour—10 p. m. in five cases, 11 p. m. in the remaining one. All girls were allowed to be out in the evening and in three cases were allowed to have a night key upon the payment of a 25-cent deposit; in all other cases they were let in by the matron after the doors were locked. In all cases, however, they were supposed to let the matron know when they expected to be out after certain hours, usually 10 p. m. The following table gives the name, location, restrictions, and rates for these eight homes:

TABLE 5.—WORKING GIRLS' HOMES IN WASHINGTON, IN DECEMBER, 1917.

Name.	Years in existence.	Number of girls accommodated.	Restrictions as to—			Rates.	
			Wage.	Age.	Religion.	Per week or month in 1917.	How determined.
Girls' Friendly[1]	5	24	Low.. None.	Under 25. 25-35.....	None.. ...do...	$3.50-$7 week (3 meals).....	On salary.
Girls' Friendly Lodge.	(2)	20	None.	Under 30.	...do...	$32 month (3 meals).....	Flat rate.
St. Catherine's.	25	75	...do..	None.....	...do...	$2.50 week-$30 month (3 meals).	On salary.
St. Gertrude's..	1	19	...do..	None[3]....	...do...	$3.50-$5.50 week (3 meals)...	Do.
Sunshine Home	7	22	...do..	None[4]...	...do...	$2.50 week (3 meals)[5].....	Flat rate.
W. C. A.....	49	52	...do..	None[6]...	...do...	$5-$5.50 week (2 meals)[7].....	$5 for double rooms, $5.50 for single rooms.
Y. W. C. A....	(2)	[8] 100	...do..	Under 35.	...do...	$10-$20 month for room, $18 month for meals.	On room.
Y. W. C. H....	30	77	...do..	...do.....	...do...	$1.50 week-$30 month.....	On salary.

[1] The Girls' Friendly is divided into two sections each accommodating 12 women.
[2] Less than one year.
[3] Under 30 preferred.
[4] Under 35 preferred.
[5] $2 week in 1916.
[6] Under 40 preferred.
[7] $4 and $4.50 in 1916.
[8] 75 permanent; 25 transient. New building will accommodate 36 permanent and 8 transient.

EXPENDITURES FOR SICKNESS, AMUSEMENT, AND OTHER INCIDENTALS.

Food, clothing, and shelter demand the major portion of the income of every person of moderate wages or salary. But they do not exhaust even what may be termed the primary needs of human existence. Medical attention when sick and some amusement when well are certainly primary needs. The income of a working woman, as that of every other person, must be able to meet some expenditure

for these purposes, and also should be able to meet the costs of many other items, such as insurance, organization dues, car fare, gifts, etc.

The accompanying table (Table 6) indicates the amount and character of the expenditures made for all purposes other than food, clothing, and lodging, by the wage-earning women covered by this investigation. The data of the table are limited to those women, 137 in number, who were living away from home and who were entirely self-supporting. It is among such women, wholly dependent upon their own resources, that the matter of income apportionment is of particular interest and significance. A few of the more striking points of the table may be briefly commented upon.

Sickness.—Of the 137 women included, 93, or almost 70 per cent, had some expense for sickness during the year, the average for the whole group of 137 being $14. The proportion of women having expenditures for sickness was fairly uniform in the different income groups. The average amount spent tended to increase with increasing income, but not as rapidly as with many other items. Thus, for those with incomes of less than $300 per year, the average expenditure for sickness was $11.74, while among those with incomes of $800 to $1,100 the average was $18.31.

Amusements and vacation.—Expenditures for amusements averaged $7.44 per year for the total group of 137 women, and expenditures for vacation averaged $13.16. These amounts represent average weekly expenditures of only 14 cents and 25 cents, respectively, per individual. Both of these items tended to increase rapidly with increasing incomes, especially the item of vacation expenses. Of the 17 women with incomes of less than $300 per year, only 4 reported any expenditures for vacation purposes, the average for this group being only $1.56 per year. Among the women with incomes of $800 to $1,100, 12 out of the 13 scheduled reported vacation expenditures, the average being $46.27.

Insurance.—Insurance was carried by almost 75 per cent of the 137 women, the average expenditure of the whole group being $9.65.

Organizations.—Only 11 of the 137 women were members of labor organizations, and all of those were women with annual incomes of at least $500.

School tuition.—Eleven women incurred expenses for school tuition during the year, all of these being women with incomes of at least $500.

Car fare.—Car fare to and from work is unavoidable in the case of women living beyond a certain distance of their places of employment and must be spent at times by many other women. Eighty-three of the 137 women had such expenses, the average for the whole number being $10.85.

Books and newspapers.—Expenditures for this item were very small. Of the 17 women with incomes under $300 per year, only 6 reported any expenditures for this purpose, the average of all 17 being but 93 cents per year. Even for the women with incomes of from $800 to $1,100 per year, expenditures for reading matter averaged only $4.71 per year, or less than 10 cents per week.

TABLE 6.—EXPENDITURES PER YEAR FOR SICKNESS, AMUSEMENT, INSURANCE, AND VARIOUS INCIDENTALS BY 137 SELF-SUPPORTING WOMEN LIVING AWAY FROM HOME.

	Expenditures of women with annual incomes of—							Total.
	Under $300.	$300 and under $400.	$400 and under $500.	$500 and under $600.	$600 and under $700.	$700 and under $800.	$800 and under $1,100.	
Number of women in income group	17	16	28	31	14	18	13	137
Sickness:								
Number of women having expenditures for	12	10	22	20	11	11	7	93
Average expenditures for total group	$11.74	$11.31	$13.52	$16.03	$12.04	$14.18	$18.31	$14.00
Dentistry:								
Number of women having expenditures for	3	4	10	14	4	9	8	52
Average expenditures for total group	$2.18	$2.50	$4.32	$8.84	$1.43	$13.89	$8.73	$6.55
Occulist:								
Number of women having expenditures for	1	2	8	7	3	3	4	28
Average expenditures for total group	$0.76	$0.61	$2.46	$2.09	$1.57	$1.89	$4.65	$1.99
Amusements:								
Number of women having expenditures for	10	11	20	21	12	17	13	104
Average expenditures for total group	$4.03	$3.32	$4.38	$8.97	$7.50	$11.89	$13.73	$7.44
Vacation:								
Number of women having expenditures for	4	11	15	20	9	12	12	93
Average expenditures for total group	$4.56	$5.40	$1.78	$10.43	$22.44	$17.61	$46.27	$13.16
Fruit, candy, etc.:								
Number of women having expenditures for	5	7	14	20	7	14	11	78
Average expenditures for total group	$2.06	$2.02	$5.07	$6.03	$4.29	$11.82	$8.62	$5.70
Insurance:								
Number of women having expenditures for	13	13	22	24	10	14	4	100
Average expenditures for total group	$6.90	$8.19	$9.35	$8.75	$12.51	$11.39	$12.35	$9.65
Charity:								
Number of women having expenditures for	2	4	8	13	7	13	10	57
Average expenditures for total group	$0.24	$1.00	$0.63	$1.45	$2.88	$4.15	$3.69	$1.79
Religion:								
Number of women having expenditures for	7	10	21	23	12	15	10	98
Average expenditures for total group	$0.97	$2.53	$2.60	$1.34	$9.11	$7.82	$6.81	$4.54
Organizations—labor:								
Number of women having expenditures for	.....	.....	.....	5	1	3	2	11
Average expenditures for total group	.....	.....	.....	$0.77	$0.03	$0.80	$0.15	$0.30
Organizations—other:								
Number of women having expenditures for	1	.....	2	6	3	7	3	22
Average expenditures for total group	$0.39	.....	$0.13	$0.43	$1.26	$0.92	$0.69	$0.49
School tuition:								
Number of women having expenditures for	.....	.....	.....	3	2	2	4	11
Average expenditures for total group	.....	.....	.....	$2.77	$1.79	$0.36	$8.92	$1.70
Car fare—to and from work:								
Number of women having expenditures for	9	8	10	23	10	14	9	83
Average expenditures for total group	$2.06	$7.17	$6.93	$15.63	$12.61	$17.70	$12.50	$10.85
Car fare—other:								
Number of women having expenditures for	10	14	26	25	12	17	12	116
Average expenditures for total group	$2.61	$5.56	$6.22	$7.97	$8.59	$12.68	$13.10	$7.84
Furniture:								
Number of women having expenditures for	2	1	3	6	2	6	6	26
Average expenditures for total group	$1.59	$1.13	$3.96	$7.48	$3.36	$10.33	$23.69	$6.78

Library

TABLE 6.—EXPENDITURES PER YEAR FOR SICKNESS, AMUSEMENT, INSURANCE, AND VARIOUS INCIDENTALS BY 137 SELF-SUPPORTING WOMEN LIVING AWAY FROM HOME—Concluded.

	Expenditures of women with annual incomes of—							Total.
	Under $300.	$300 and under $400.	$400 and under $500.	$500 and under $600.	$600 and under $700.	$700 and under $800.	$800 and under $1,100.	
Books and newspapers:								
Number of women having expenditures for	6	2	18	18	11	14	11	80
Average expenditures for total group	$0.93	$0.28	$2.92	$2.58	$4.20	$4.58	$4.71	$2.81
Gifts:								
Number of women having expenditures for	11	13	23	30	12	18	13	120
Average expenditures for total group	$3.21	$7.13	$11.34	$14.05	$13.11	$26.83	$35.50	$14.96
For family and dependents:								
Number of women having expenditures for	3	4	6	13	4	6	4	40
Average expenditures for total group	$6.18	$12.67	$8.42	$22.77	$5.36	$34.87	$14.31	$15.61
Other incidentals:								
Number of women having expenditures for	17	16	28	31	14	18	13	137
Average expenditures for total group	$3.79	$10.88	$8.45	$12.23	$14.79	$18.32	$15.99	$11.67
Average expenditures—All incidentals	$51.18	$81.68	$95.49	$153.61	$141.86	$222.00	$252.73	$137.81

COST OF LIVING IN GERMANY, APRIL, 1916.

INTRODUCTION.

The enormous increase in the cost of living in Germany since July, 1914, has been one of the most discussed problems of the war. Vague statements as to the high cost of living have appeared in the daily press from time to time, but until the war committee on consumers' interests made two extensive investigations in April and July, 1916, no accurate data were available. When the results of these two investigations had been compiled the committee put them at the disposal of the Imperial Statistical Office (Division for Labor Statistics) which published a brief summary in the Reichs-Arbeitsblatt of February 23 and March 23, 1917.

PLAN OF THE INVESTIGATIONS.

During the month of April, 1916, the war committee on consumers' interests made for the first time an extensive investigation as to the cost of living of families residing in cities. About 4,000 schedules were distributed in the individual cities by local and district committees to families who had declared their willingness to cooperate in the investigation. The schedules consisted of two sheets marked A and B. The daily expenditures (in marks) and the weight (in grams) of the food purchased during the month of April were to be entered each day on sheet A. The daily expenditures and quantities purchased were to be added each week and the totals entered on sheet B and there added at the end of the month. In addition to the amounts

spent for food all expenditures for fuel, light, rent, taxes, clothing, laundry, household utensils, books, newspapers, transportation, physician, drugs, barber, insurance, membership fees, amusements, gifts, tips, etc., were also to be entered. Sheet B also contained questions as to the place of residence, occupation of the head of the family, number of persons composing the family (number of adults, children 1 to 10 years, and over 10 to 16 years old, and infants), and number of persons in the family having a regular gainful occupation and their earnings during April. The schedules were accompanied by detailed instructions as to the manner in which they were to be filled in, particular emphasis being laid on the urgent necessity of correctness in entering expenditures for food and the quantities of food consumed. The instructions also pointed out that only the proportionate amount properly chargeable to April for such items as rent, taxes, tuition fees, etc., should be entered on the questionnaire, and that expenditures for clothing should be computed similarly.

At the beginning of May the schedules numbering about 900 were collected by the committees and sent to headquarters where they were first thoroughly examined in order to determine the correctness or probability of the data relating to expenditures and quantities consumed. Incomplete or improbable data were supplemented whenever this was practicable. Otherwise they were discarded. Of the 900 schedules, 858 were found to be usable. Sheets A and B were examined to see whether the weekly entries corresponded to the totals of the daily expenditures. Special attention was paid to expenditures other than for food. Here it was found that in spite of the admonitions in the instructions the data for rent, taxes, and other expenditures in many instances covered quarterly or even half-yearly periods instead of only the month of April, as required. This was, of course, corrected. On the whole, however, the compilation was effected with the thought of making as few changes as possible in the original data, and of resorting to corrections only in case of evident errors which appeared from a comparison of sheets A and B.

The next task was the computation of the expenditures and of the quantities consumed per unit of consumption, arranged by income groups. After this was done, families of four persons were selected within the two largest income groups, that is, those with monthly incomes of from 100 to 200 and from 200 to 300 marks, and their monthly average expenditures and consumption computed by occupations. It should be mentioned that whenever the word income or income group is used here income from earnings only and not from other sources is meant.

In the computation of the expenditures per unit of consumption, children under 11 years of age were counted as half a unit within the

individual families. This method of computation is of course essentially less precise than the so-called computation by "quets," proposed by Engel and of late generally adopted in cost-of-living investigations, which considers the composition of families by age and sex, and the relative consuming powers of the different members. The quet method could not be adopted in the present investigation because the schedules used distinguished only between children 1 to 10 and 11 to 16 years of age.

As has been mentioned, the number of usable schedules was 858. The 858 households to which these schedules related were composed of 4,079 persons, of which 2,261 were adults (over 16 years of age), 758 were children 11 to 16 years of age, 986 were children 1 to 10 years of age, and 74 were infants. The total number of units of consumption in these families was 3,733,[1] children under 11 years of age having been counted as half a unit.

The 858 households were distributed among the individual cities as follows: Four hundred and seventy-two families lived in 27 large cities each with a population of 100,000 or more; 279 families lived in 20 medium-sized cities each with a population of over 20,000 and less than 100,000; 107 families lived in 8 small cities each with a population of over 5,000 and less than 20,000. Thus more than half of the families included in the investigation lived in large cities.

According to their monthly income (earnings from work) the families were distributed in the following seven groups:

NUMBER OF FAMILIES AND UNITS OF CONSUMPTION, BY INCOME GROUPS.

Income group.	Number of families.	Units of consumption.
Less than 100 marks ($23.80)	25	65
100 marks ($23.80) to 200 marks ($47.60)	319	1,249
Over 200 to 300 marks ($47.60 to $71.40)	271	1,251
Over 300 to 400 marks ($71.40 to $95.20)	139	685
Over 400 to 500 marks ($95.20 to $119)	37	167
Over 500 marks ($119)	32	184
Income not stated	35	132
Total	858	3,733

[1] This is the total given in the report; how it was determined is not clear, since 2,261 units (adults) and 758 units (children 11 to 16 years of age) and 530 units (one-half of the total of children 1 to 10 years, and infants) make a total of 3,549 units.

The distribution of the 858 families according to the occupation of the head of the household was as follows:

NUMBER OF FAMILIES, BY OCCUPATION OF HEADS OF HOUSEHOLDS.

Occupation.	Number of families.
Higher Government employees	48
Medium-salaried Government employees	114
Low-salaried Government employees	63
Private salaried employees	166
Workmen	183
Free professions	22
Wives of soldiers	31
Not reported	231
Total	858

The majority of the families included in the investigation were middle-class families.

RESULTS OF THE INVESTIGATION.

The results of the investigation described above are given here in a series of general tables of which the following table shows the average expenditures per unit of consumption, by classified income, in actual and relative figures:

TABLE 1.—AVERAGE EXPENDITURES OF GERMAN FAMILIES DURING APRIL, 1916, FOR VARIOUS PURPOSES PER UNIT OF CONSUMPTION, BY CLASSIFIED INCOMES.

AMOUNT.

Object of expenditure.	Expenditures per family having classified amount of income.							Average expenditure all families (858 families; 3,733 units; 4.2 units per family).
	Under $23.80 (25 families; 65 units; 2.6 units per family).	$23.80 to $47.60 (319 families; 1,249 units; 3.9 units per family).	Over $47.60 to $71.40 (271 families; 1,251 units; 4.6 units per family).	Over $71.40 to $95.20 (139 families; 685 units; 4.9 units per family).	Over $95.20 to to $119 (37 families; 167 units; 4.5 units per family).	Over $119 (32 families; 184 units; 5.7 units per family).	Income not stated (35 families; 132 units; 3.7 units per family).	
Food, beverages, etc	$8.34	$8.22	$9.00	$9.92	$11.73	$11.62	$12.29	$9.29
Rent	1.54	1.43	1.72	2.05	2.90	4.19	3.42	1.90
Clothing and laundry	1.31	1.38	1.60	1.98	2.60	2.60	1.93	1.70
Fuel and light	.55	.54	.58	.68	.87	1.07	1.17	.64
Miscellaneous	3.35	2.36	3.42	5.25	6.96	8.36	7.73	4.29
Total	15.09	13.93	16.32	19.88	25.06	27.84	26.54	17.82

PER CENT.

Food, beverages, etc	55.22	59.00	55.13	49.87	46.81	41.74	46.28	52.14
Rent	10.20	10.23	10.57	10.33	11.59	15.03	12.89	10.67
Clothing and laundry	8.70	9.93	9.78	9.98	10.37	9.35	7.28	9.53
Fuel and light	3.64	3.88	3.54	3.42	3.47	3.83	4.41	3.61
Miscellaneous	22.22	16.96	20.98	26.40	27.76	30.04	29.14	24.05
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

A study of the data shown in the preceding table reveals the striking fact that 52.14 per cent, or over one-half of the average total expenditures of the 858 families included in the investigation went for food. These figures are expressive of the food shortage during the war and of the consequent increased cost of the principal foodstuffs. According to the investigations of the Imperial Statistical Office of 1907[1] which related to families with a considerably smaller average income than that of the families considered in the present investigation, the average expenditures for food amounted to only 45.57 per cent of the total expenditures. In the low income classes the percentage of expenditures for food, as was to be expected, was much higher than the average percentage. In the income class of 100 to 200 marks ($23.80 to $47.60) it was 59 per cent and in the income class of 200 to 300 marks ($47. 60 to $71.40) it was over 55 per cent, but even in the higher income classes the average was not less than 41.74 per cent while, according to the investigation of 1907, families in the higher income classes spent for food an average of only 36 per cent of their total expenditures. Not counting the miscellaneous group, expenditures for rent come next to food in importance. They amounted to between 10 and 16 per cent (average 10.67 per cent). The next largest item was clothing and laundry for which the average expenditure amounted to 9.53 per cent of the total expenditure.

In view of the scarcity and high cost of food in Germany during the war, the following table, which shows the average expenditure and percentage of expenditure for individual foodstuffs per unit of consumption, by classified income, is of special interest.

TABLE 2.—AVERAGE EXPENDITURES OF GERMAN FAMILIES DURING APRIL, 1916, FOR FOOD PER UNIT OF CONSUMPTION, CLASSIFIED BY MONTHLY INCOMES.

AMOUNT.

Item.	Expenditure per family having classified amount of income.							
	Under $23.80 (25 families; 2.6 units per family).	$23.80 to $47.60 (319 families; 3.9 units per family).	Over $47.60 to $71.40 (271 families; 4.6 units per family).	Over $71.40 to $95.20 (139 families; 4.9 units per family).	Over $95.20 to $119 (37 families; 4.5 units per family).	Over $119 (32 families; 5.7 units per family).	Income not stated (35 families; 3.7 units per family).	Average expenditure, all families (858 families; 4.2 units per family).
1. Food consumed in the household:								
Bread, rolls, etc.	$0.80	$0.83	$0.82	$0.80	$0.82	$0.78	$0.83	$0.82
Other bakery goods, cakes, etc.	.23	.17	.20	.19	.33	.28	.23	.20
Flour, grits, farinaceous foods, etc.	.24	.32	.34	.37	.44	.47	.44	.35
Potatoes	.45	.51	.49	.50	.43	.39	.43	.49
Butter, lard, margarine, oil	.81	.96	.97	1.08	1.03	1.02	1.07	.99
Meat, sausage, ham, etc.	.80	1.18	1.49	1.83	2.35	2.53	2.29	1.56
Conserved meat	.51	.25	.33	.29	.20	.17	.40	.28
Fish, smoked and fresh; crabs, etc.	.24	.25	.24	.29	.32	.42	.36	.27

[1] See Bulletin No. 8[illegible] of the United States Bureau of Labor. Cost of living of families of moderate income in Germany in 1907–8.

TABLE 2.—AVERAGE EXPENDITURES OF GERMAN FAMILIES DURING APRIL, 1916, FOR FOOD PER UNIT OF CONSUMPTION, CLASSIFIED BY MONTHLY INCOMES—Continued.

AMOUNT—Concluded.

Item.	Expenditure per family having classified amount of income.							
	Under $23.80 (25 families; 2.6 units per family).	$23.80 to $47.60 (319 families; 3.9 units per family).	Over $47.60 to $71.40 (271 families; 4.6 units per family).	Over $71.40 to $95.20 (139 families; 4.9 units per family).	Over $95.20 to $119 (37 families; 4.5 units per family).	Over $119 (32 families; 5.7 units per family).	Income not stated (35 families; 3.7 units per family).	Average expenditure, all families (858 families; 4.2 units per family).
1. Food consumed in the household—Concluded.								
Fish canned	$0.11	$0.09	$0.10	$0.12	$0.17	$0.11	$0.11	$0.11
Eggs	.30	.49	.55	.63	.75	.63	.70	.56
Milk, fresh	.61	.53	.51	.50	.57	.60	.74	.53
Milk, condensed	.13	.12	.13	.12	.21	.15	.09	.13
Cheese, cottage cheese, etc	.15	.21	.23	.26	.29	.34	.37	.24
Vegetables (fresh and dried), fruit	.19	.23	.28	.39	.52	.59	.58	.32
Canned fruits and vegetables	.25	.12	.16	.19	.26	.30	.29	.17
Jam, preserved fruits, etc.	.24	.21	.23	.26	.34	.33	.27	.24
Sugar	.18	.18	.18	.18	.20	.20	.20	.18
Cocoa, chocolate, sweets	.16	.13	.13	.19	.24	.26	.26	.17
Spices, salt, vinegar, lemons, etc	.10	.12	.13	.15	.19	.19	.12	.14
Coffee, pure and in mixtures	.21	.24	.24	.28	.36	.25	.22	.25
Coffee substitutes	.12	.11	.10	.09	.09	.06	.10	.09
Nonalcoholic drinks, tea, etc	.12	.06	.11	.11	.16	.14	.18	.10
Food substitutes	.08	.08	.08	.07	.10	.08	.16	.08
Other foodstuffs	.16	.15	.17	.16	.12	.19	.15	.16
Total	7.18	7.54	8.21	9.05	10.49	10.48	10.59	8.45
2. Alcohol, tobacco, cigars	.23	.31	.34	.41	.62	.44	.60	.36
3. Food and beverages consumed outside the household	.92	.38	.45	.46	.62	.70	1.09	.48
Grand total	8.33	8.23	9.00	9.92	11.73	11.62	12.28	9.29

PER CENT.

1. Food consumed in the household:								
Bread, rolls, etc	11.21	11.01	10.00	8.86	7.93	7.41	7.80	9.69
Other bakery goods, cakes, etc	3.22	2.31	2.43	2.10	3.13	2.70	2.18	2.59
Flour, grits, farinaceous foods, etc	3.28	4.11	4.12	4.13	4.18	4.47	4.20	4.17
Potatoes	6.30	6.77	6.03	5.54	4.11	3.70	4.07	5.40
Butter, lard, margarine, oil	11.24	12.71	11.83	11.89	9.80	9.70	10.07	11.72
Meat, sausage, ham	11.07	15.72	18.12	20.25	22.40	24.12	21.63	18.16
Conserved meat	7.13	3.29	4.03	3.16	1.91	1.66	3.75	3.22
Fish, fresh and smoked; crabs, etc	3.35	3.26	2.90	3.26	3.06	4.04	3.37	3.21
Fish, canned	1.59	1.17	1.28	1.29	1.63	1.07	1.03	1.30
Eggs	4.24	6.55	6.70	7.02	7.19	6.03	6.59	6.65
Milk, fresh	8.49	6.99	6.17	5.57	5.45	5.74	6.97	6.28
Milk, condensed	1.82	1.52	1.59	1.29	2.04	1.48	.85	1.55
Cheese, cottage cheese, etc	2.12	2.78	2.81	2.84	2.75	3.22	3.53	2.84
Vegetables (fresh and dried), fruit	2.69	3.10	3.36	4.34	4.97	5.61	5.44	3.8
Canned fruits and vegetables	3.55	1.58	1.91	2.13	2.43	2.82	2.74	2.06
Jam, preserved fruits, etc	3.38	2.85	2.78	2.89	3.27	3.13	2.50	2.87
Sugar	2.49	2.44	2.17	2.00	1.88	1.84	1.93	2.17
Cocoa, chocolate, sweets	2.22	1.70	1.65	2.05	2.27	2.52	2.45	1.97
Spices, salt, vinegar, lemons, etc	1.39	1.60	1.65	1.63	1.79	1.82	1.15	1.61
Coffee, pure and in mixtures	2.85	3.23	2.93	3.05	3.43	2.36	2.07	2.99

TABLE 2.—AVERAGE EXPENDITURES OF GERMAN FAMILIES DURING APRIL, 1916, FOR FOOD PER UNIT OF CONSUMPTION, CLASSIFIED BY MONTHLY INCOMES—Concluded.

PER CENT—Concluded.

Item.	Expenditure per family having classified amount of income.							
	Under $23.80 (25 families; 2.6 units per family).	$23.80 to $47.60 (319 families; 3.9 units per family).	Over $47.60 to $71.40 (271 families; 4.6 units per family).	Over $71.40 to $95.20 (139 families; 4.9 units per family).	Over $95.20 to $119 (37 families; 4.5 units per family).	Over $119 (32 families; 5.7 units per family).	Income not stated (35 families; 3.7 units per family).	Average expenditure, all families (858 families; 4.2 units per family).
1. Food consumed in the household—Concluded.								
Coffee substitutes	1.66	1.39	1.15	0.97	0.86	0.61	0.92	1.13
Nonalcoholic drinks, tea, etc	1.69	.82	1.33	1.18	1.54	1.32	1.73	1.18
Food substitutes	.90	1.11	.96	.74	.95	.77	1.52	.96
Other foodstuffs	2.02	1.99	2.09	1.81	1.12	1.82	1.42	1.88
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Per cent of grand total.								
1. Food consumed in the household	86.12	91.55	91.22	91.26	89.39	90.19	86.19	90.94
2. Alcohol, tobacco, cigars	2.83	3.76	3.78	4.08	5.34	3.79	4.94	3.92
3. Food and beverages consumed outside the household	11.05	4.69	5.00	4.66	5.27	6.02	8.87	5.14
Grand total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Of the expenditures for food consumed in the household those for meat and meat products come in first place. They form 18.5 per cent of the total so expended, and 21.8 per cent if conserved meat is included. The relatively large expenditures for conserved meat indicate the shortage of fresh meat which had already made itself felt in April, 1916, and thereafter became still more acute. The large expenditures for fish—3.2 per cent, and inclusive of canned fish, 4.5 per cent—which in peace times formed only 1 or at the most 2 per cent of the total expenditures for food, and the large expenditures for potatoes—nearly 6 per cent against 3 to 4 per cent in peace times—and jam which was used as a substitute for the very scarce butter, and bakery goods and cakes which had to supplement the scanty bread rations, and the large consumption of substitutes and preserved foods, are also significant of the changed standard of nutrition of the urban population brought about by the high cost of living and the shortage of foodstuffs during the war.

If the data shown in the preceding table are considered by income groups, it is found that the expenditures for conserved meat in contrast to those for fresh meat decrease with increasing income, indicating that even in April, 1916, the poorer classes of the population had begun to consume extensively conserved meat in preference to

the scarce fresh meat which could only be obtained at prohibitive prices. Among the financially better situated classes, on the other hand, the consumption of preserved vegetables increases with increasing income.

The expenditures for preserved foods and substitutes and for "other foodstuffs" participated in the total expenditures of the individual income groups for food consumed in the household with the following percentages:

PERCENTAGE OF EXPENDITURES FOR PRESERVED FOODS, FOOD SUBSTITUTES, AND "OTHER FOODSTUFFS," BY INCOME GROUPS.

Income group.	Per cent.
100 to 200 marks ($23.80 to $47.60)	12.05
Over 200 to 300 marks ($47.60 to $71.40)	13.05
Over 300 to 400 marks ($71.40 to $95.20)	11.39
Over 400 to 500 marks ($95.20 to $119)	10.94
Total average	12.20

The expenditures for tobacco and alcoholic beverages formed on an average about 4 per cent, and those for meals in restaurants, cafés, etc., about 5 per cent of the total expenditures for food and beverages.

The average quantities consumed per unit of consumption, classified by income, are shown in the following table. These data are of special value because in former cost of living investigations data as to quantities consumed were very rare and as a rule not very reliable. In peace times such data are harder to obtain from the individual housekeepers than during the present war when most of the important foodstuffs have been rationed by weight and more attention is paid to the quantities of food purchased because of the general scarcity. The report on the investigation states that the data as to quantities shown in the schedules have been examined very carefully before being compiled and that consequently it can be assumed that they represent as nearly as possible the actual quantities consumed. Food consumed away from home and not taken therefrom has not been included.

TABLE 3.—AVERAGE QUANTITIES OF FOODSTUFFS CONSUMED BY GERMAN FAMILIES DURING APRIL, 1916, PER UNIT OF CONSUMPTION, CLASSIFIED BY MONTHLY INCOMES.

[Not all families having furnished data as to quantities of all foodstuffs consumed, the number of units of consumption to which the data shown in the table relate are placed within parentheses.]

Article.	Families having classified amount of income.							
	Under $23.80 (25 families; 65 units).		$23.80 to $47.60 (319 families; 1,249 units).		$47.60 to $71.40 (271 families; 1,251 units).		$71.40 to $95.20 (139 families; 685 units).	
		Pounds.		*Pounds.*		*Pounds.*		*Pounds.*
Bread, rolls, etc		21.5		18.9		18.4		17.6
Other bakery goods, cakes, etc	(24)	1.7	(814)	.9	(878)	1.1	(548)	1.0
Flour, grits, farinaceous foods, etc		.2		3.2		3.1		3.3
Potatoes		35.0		40.1		36.2		37.3
Butter, lard, margarine, oil		1.7		1.9		1.9		2.0
Meat, fresh; sausage, ham, etc		1.7		2.7		3.2		4.0
Meat, conserved	(6)	.4	(381)	.7	(441)	1.0	(261)	.0
Fish, smoked and fresh; crabs, etc	(33)	1.1	(881)	1.4	(990)	1.5	(544)	1.9
Fish, canned	(4)	.4	(128)	.4	(212)	.3	(146)	.4
Eggs		[1] 8		[1] 12		[1] 11		[1] 13
Milk		[2] 10.6		[2] 8.5		[2] 7.4		[2] 7.5
Milk, condensed	.....		(261)	.5	(295)	.8	(199)	.4
Cheese, cottage cheese	(46)	.6	(1,095)	.8	(1,138)	.8	(653)	.4
Vegetables, fresh and dried; fruit	(44)	3.5	(1,112)	3.3	(1,169)	3.2	(562)	4.9
Vegetables and fruit, canned	(16)	4.4	(663)	1.3	(651)	1.6	(494)	1.1
Jam, preserved fruit, artificial honey, etc	(55)	2.3	(1,149)	1.9	(1,135)	1.8	(627)	2.9
Sugar		2.5		2.7		2.5		2.0
Cocoa, chocolate, sweets	(25)	.4	(749)	.4	(811)	.2	(544)	.5
Coffee, pure and in mixtures	(44)	.4	(972)	.5	(1,077)	.4	(620)	.6
Coffee substitutes	(55)	1.3	(1,162)	.8	(1,158)	.8	(643)	.73

Article.	Families having classified amount of income.							
	$95.20 to $119 (37 families; 167 units).		Over $119 (32 families; 184 units).		Income not stated (35 families; 132 units).		Total (858 families; 3,733 units).	
		Pounds.		*Pounds.*		*Pounds.*		*Pounds.*
Bread, rolls, etc		17.2		17.4		17.0		18.3
Other bakery goods, cakes, etc	(122)	1.8	(171)	1.6	(118)	.5	(2,675)	1.0
Flour, grits, farinaceous foods, etc		3.1		3.4		3.9		3.2
Potatoes		31.6		33.2		28.5		37.0
Butter, lard, margarine, oil		1.8		2.0		2.0		1.9
Meat, fresh; sausage, ham, etc		4.5		5.0		5.2		3.4
Meat, conserved	(80)	.7	(94)	.5	(31)	1.1	(1,294)	.8
Fish, smoked and fresh; crabs, etc	(145)	1.4	(168)	2.1	(119)	1.9	(2,880)	1.5
Fish, canned	(47)	.3	(71)	.3	(19)	.7	(627)	.4
Eggs		[1] 16		[1] 13		[1] 12		[1] 12
Milk		[2] 9.5		[2] 14.8		[2] 11.6		[2] 8.5
Milk, condensed	(94)	.7	(71)	.6	(36)	.05	(963)	.6
Cheese, cottage cheese		.7	(178)	.8	(115)	.7	(3,392)	.8
Vegetables, fresh and dried; fruit		4.9		5.8	(125)	8.0	(3,363)	3.8
Vegetables and fruit, canned	(124)	2.4	(169)	3.0	(81)	3.3	(2,198)	1.9
Jam, preserved fruit, artificial honey, etc	(155)	2.3	(178)	2.5	(121)	2.0	(3,420)	2.0
Sugar		2.6		2.9		3.0		2.6
Cocoa, chocolate, sweets	(147)	.3	(164)	.4	(104)	.4	(2,544)	.3
Coffee, pure and in mixtures	(153)	.7	(179)	.4	(124)	.4	(3,169)	.5
Coffee substitutes	(131)	.6	(172)	.6	(102)	.9	(3,423)	.8

[1] Number. [2] Quarts.

The preceding table gives a true picture of the diet of the German urban population during the war. As to quantity of the individual foodstuffs consumed in April, 1916, potatoes come in first place, the 858 families included in the investigation having consumed 16.79 kilograms (37 pounds) of potatoes per unit of consumption, a consumption twice as large as that of bread and rolls combined which is due partly to the reduced bread ration. The consumption of vegetables and fruit, fresh and preserved, with 2.57 kilograms (5.7 pounds), comes in third place, and that of fresh and conserved meat with 1.90

kilograms (4.2 pounds) in fourth place. The consumption of fish was nearly half that of meat, showing a considerable increase as compared with peace-time consumption. An analysis of the data for the individual income groups corroborates the well-known fact of decreased consumption of potatoes and bread and increased consumption of meat in the groups with higher incomes. It also shows that the consumption of vegetables, fresh and preserved, jam, sugar, cocoa, and sweets, increases with increased income. With the exception of the lowest income group the consumption of cheese was nearly the same in all income groups.

The consumption of preserved foods in the various income groups was the following:

CONSUMPTION OF PRESERVED FOODS, BY INCOME GROUPS.

Income group.	Pounds.
100 to 200 marks ($23.80 to $47.60)	2.92
Over 200 to 300 marks ($47.60 to $71.40)	3.77
Over 300 to 400 marks ($71.40 to $95.20)	3.57
Over 400 to 500 marks ($95.20 to $119)	4.01
Average	3.60

The expenditures for all items and the consumption of food of families of 4 persons of the two largest income groups, those relating to incomes of 100 to 200 marks ($23.80 to $47.60) and of over 200 to 300 marks ($47.60 to $71.40) arranged by occupations of the heads of the families are shown in the four tables which follow:

TABLE 4.—AVERAGE EXPENDITURES FOR APRIL, 1916, OF SELECTED GERMAN FAMILIES OF FOUR PERSONS WITH A MONTHLY FAMILY INCOME OF 100 TO 200 MARKS ($23.80 TO $47.60), BY OCCUPATION OF HEADS OF FAMILIES.

[The figures in this table are taken from the original report. In that report the average total expenditure per family of all of the 57 families included in the table is given as 222.05 marks ($52.85), which does not correspond to the average of the totals shown for the individual occupational groups. On the basis of the latter the average expenditures per family of all the 57 families would be only 217.39 marks ($51.71).]

Object of expenditure.	Low-salaried Government employees (19 families).	Private salaried employees (6 families).	Workmen (16 families).	Occupation not stated (16 families).	Average (57 families).	
					Amount.	Per cent.
Food and beverages consumed in and outside of the household	$31.21	$29.51	$33.30	$30.09	$31.51	59.69
Fuel, wood, coal, light	2.08	1.83	1.96	1.83	1.95	3.69
Rent	6.33	5.39	4.73	5.63	5.41	10.25
Taxes	.86	.81	1.02	1.07	.95	1.80
Clothing, shoes, repairs	4.82	4.00	3.21	3.94	4.03	7.63
Miscellaneous expenditures:						
Laundry, soap, soda	1.18	1.33	1.18	1.24	1.21	2.29
Household utensils, furniture, etc	.35	.32	.35	.34	.35	.65
Books, newspapers, etc	.68	.51	.67	.80	.69	1.32
Car fare	.64	.55	.64	.59	.64	1.22
Physician, drugs	1.34	.55	.89	.54	.90	1.71
Barber, baths	.36	.33	.23	.23	.29	.54
Insurance	.93	1.21	1.24	1.21	1.12	2.12
Dues for societies	.43	.76	.75	.79	.65	1.23
Amusements, sports	.29	.12	.40	.18	.26	.50
Gifts	.89	.79	.75	.84	.81	1.53
Wages, tips	.05	1.61	.18	.....	.86	1.63
Miscellaneous	1.67	1.56	.70	1.04	1.17	2.22
Total	53.09	51.19	52.19	49.88	52.85	100.00

The monthly average of expenditures for April, 1916, of a family of four persons with a monthly family income of from 100 to 200 marks ($23.80 to $47.60), amounted to 222.05 marks ($52.85) according to the preceding table. This means that on an average all families coming within the above classification lived beyond the income derived from their earnings and that the deficit of their budget had to be covered from other sources of income or from their savings, while families having neither other sources of income nor savings were forced to contract debts in order to obtain the necessities of life. The report states that in view of the greatly increased cost of living it seems very probable that in the lowest income group the living expenses exceeded the income from earnings.

The expenditures for food, beverages, etc., of a family of four persons of the income group considered in the table were 132.36 marks ($31.51), those for rent 22.76 marks ($5.41), for heat and light 8.20 marks ($1.95), for clothing, shoes, and repairs 16.95 marks ($4.03), for laundry, soap, and soda 5.09 marks ($1.21), and for taxes 4 marks (95 cents). The expenditures for books, newspapers, etc., amounted to 2.92 marks (69 cents) and those for amusements and sports to only 1.10 marks (26 cents). The report observes that the figures for these two items furnish gratifying proof that the families in this income group preferred reading to amusements. The expenditures for insurance, medical treatment, and drugs, amounting to 4.71 and 3.80 marks ($1.12 and 90 cents), respectively, were relatively large. Membership in trade and professional unions required a monthly outlay of 2.74 marks (65 cents). That the expenditures for gifts reached the relatively large amount of 3.52 marks (84 cents) is to be explained by the fact that nearly all families have relatives in the army or navy to which gifts were frequently sent by parcel post.

An analysis of the expenditures of these families by occupational groups shows that families of low-salaried Government employees spend less for food than workmen's families but more for rent, clothing, shoes, books, newspapers, medical treatment and drugs, baths, shaving, and hair cutting. The table also shows that workmen's families make the largest expenditures for amusements and sports and salaried employees' families the smallest.

The expenditures for and the consumption of food of the families considered in the preceding table are itemized in the following table:

TABLE 5.—EXPENDITURES FOR AND CONSUMPTION OF FOOD DURING APRIL, 1916, OF SELECTED GERMAN FAMILIES OF FOUR PERSONS WITH A MONTHLY FAMILY INCOME OF 100 TO 200 MARKS ($23.80 TO $47.60), BY OCCUPATIONS OF HEADS OF FAMILIES.

[The totals in this table are not in all cases equal to the sum of the items, but they and the items are the exact equivalents of the figures in the original report. No explanation of the discrepancy is given.]

Item.	Low-salaried Government employees (19 families).		Private-salaried employees (6 families).		Workmen (16 families).		Occupation not stated (16 families).		Average (57 families).		
									Expenditure.		
	Expenditure.	Consumption.	Expenditure.	Consumption.	Expenditure.	Consumption.	Expenditure.	Consumption.	Amount.	Per cent.	Consumption.
Food consumed in the household:		*Lbs.*		*Lbs.*		*Lbs.*		*Lbs.*			*Lbs.*
Bread, rolls, etc.	$3.03	67.2	$2.88	65.3	$3.40	74.8	$3.42	79.9	$3.23	10.95	72.4
Other bakery goods, cakes, etc.	.43	2.4	.87	7.7	.58	4.3	.62	4.0	.60	2.02	4.3
Flour, grits, farinaceous food, etc.	1.25	12.8	1.01	10.4	1.36	12.7	1.31	12.3	1.28	4.33	10.5
Potatoes	1.48	128.7	1.84	155.2	2.51	185.1	2.06	210.9	1.97	6.68	155.6
Butter, lard, margarine, oil	3.76	7.2	3.92	7.2	4.07	8.2	4.31	8.2	4.02	13.61	7.7
Meat, sausage, ham, etc.	4.58	10.0	5.82	12.4	5.02	10.3	4.53	11.5	4.83	16.37	10.8
Conserved meat	1.03	2.8	1.18	2.5	.64	2.6	.48	1.3	.82	2.77	2.0
Fish, smoked and fresh; crabs, etc.	.82	4.2	.85	4.7	1.02	4.8	.99	6.6	.93	3.16	5.1
Fish, canned	.....	.....	.....	.....	.36	.....	.20	.....	.34	1.14	.....
Eggs	2.00	[1] 46	1.33	[1] 27	2.25	[1] 46	1.85	[1] 43	1.95	6.62	[1] 43
Milk, fresh	2.32	[2] 41.1	2.00	[2] 30.4	1.65	[2] 28.5	1.66	[2] 26.4	1.92	6.50	[2] 33.3
Milk, condensed	.44	2.6	.....	.....	.81	.....	.52	.....	.60	2.02	2.6
Cheese, cottage cheese, etc.	.78	3.5	.44	2.5	.72	2.5	.65	2.1	.69	2.33	2.7
Vegetables (fresh and dried), fruit	.92	11.3	1.34	11.5	.96	16.6	1.07	12.3	1.01	3.42	12.8
Canned fruits and vegetables	.37	2.6	.36	3.7	.66	5.6	.33	3.6	.43	1.45	3.7
Jam, preserved fruits, etc.	.75	6.4	.63	4.2	.81	7.5	.81	6.8	.77	2.62	6.5
Sugar	.70	10.8	.52	9.5	.75	11.4	.63	11.0	.68	2.30	10.9
Cocoa, chocolate, sweets	.66	1.4	.65	1.2	.69	1.6	.36	1.8	.58	1.98	1.6
Spices, salt, vinegar, lemons, etc.	.50	.....	.25	.....	.56	.....	.48	.....	.49	1.65	.....
Coffee, pure and in mixtures	.89	1.7	.73	2.0	.92	1.8	.55	1.1	.95	3.22	1.6
Coffee substitutes	.33	2.8	.34	3.4	.43	3.1	.33	3.4	.36	1.23	3.1
Nonalcoholic drinks, tea, etc.	.29	.....	.19	.....	.31	.....	.19	.....	.25	.85	.....
Food substitutes	.19	.....	.....	.....	.36	.....	.37	.....	.33	1.12	.....
Other foodstuffs	.51	.....	.22	.....	.48	.....	.60	.....	.49	1.66	.....
Total	28.05	.....	27.36	.....	31.33	.....	28.31	.....	29.50	100.00	.....
Alcohol, tobacco, cigars	.87	.....	1.23	.....	1.07	.....	.98	.....	1.00	.....	.....
Foods and beverages consumed away from home	1.29	.....	.92	.....	.91	.....	.80	.....	1.01	.....	.....
Grand total	30.21	.....	29.51	.....	33.31	.....	30.09	.....	31.50	.....	.....

[1] Number. [2] Quarts.

A family of four persons of the income group considered in the preceding table expended on an average nearly 124 marks ($29.51) for food consumed in the household. Of this amount 23.72 marks ($5.65) went for meat and meat products, inclusive of 3.43 marks (82 cents) expended for conserved meat, 16.87 marks ($4.02) for butter and fats, and 16.07 marks ($3.83) for bread and bakery goods. The expenditure for potatoes was 8.28 marks ($1.97), for eggs 8.21 marks ($1.95), for milk 8.06 marks ($1.92), for fish, fresh smoked, and conserved, 5.33 marks ($1.27), for cheese 2.89 marks

(69 cents), and for fresh and preserved fruit and vegetables 6.04 marks ($1.44). The total expenditure of the family for conserved food and food substitutes inclusive of coffee substitutes and other foodstuffs amounted to 14.20 marks ($3.38).

The distribution of the expenditures for food within the individual occupational groups shows the following facts: The expenditures of workmen's families for bread and rolls, potatoes, and butter and fats were larger than the expenditures of low-salaried Government employees' and private employees' families for the same commodities. The expenditures of workmen's families for meat were larger than those of low-salaried Government employees' and smaller than those of private employees' families, while their expenditures for fish, eggs, jam, sugar, and coffee (inclusive of coffee substitutes) were larger than those of families of the other two occupational groups. The expenditures for food consumed away from home (in restaurants, etc.) were very considerable in the case of low-salaried Government employees. The consumption of the individual foodstuffs corresponded as a rule to the expenditures. The relative quantitative importance of the individual foodstuffs consumed in urban households has already been discussed.

The average monthly expenditures of families of four persons of the income group of over 200 to 300 marks ($47.60 to $71.40), by occupational groups, is shown in Table 6, as follows:

TABLE 6.—AVERAGE EXPENDITURES FOR APRIL, 1916, OF SELECTED GERMAN FAMILIES OF FOUR PERSONS WITH A MONTHLY FAMILY INCOME OF OVER 200 TO 300 MARKS ($47.60 TO $71.40), BY OCCUPATION OF HEADS OF FAMILIES.

[The totals in this table are not in all cases equal to the sum of the items, but they and the items are the exact equivalents of the figures in the original report. No explanation of the discrepancy is given.]

Object of expenditure.	Medium-salaried Government employees (13 families).	Private salaried employees (20 families).	Workmen (13 families).	Occupation not stated (13 families).	Average (59 families).	
					Amount.	Per cent.
Food and beverages consumed in and outside of the household	$36.61	$35.09	$36.31	$37.99	$37.39	54.10
Fuel, wood, coal, light	2.67	3.37	1.91	2.59	2.78	4.02
Rent	9.82	8.71	5.91	7.16	8.00	11.57
Taxes	1.82	2.03	.95	1.59	1.67	2.42
Clothing, shoes, repairs	5.67	6.04	5.02	5.28	5.56	8.05
Miscellaneous expenditures:						
Laundry, soap, soda	1.48	1.36	1.68	1.68	1.53	2.21
Household utensils, furniture, etc	.35	.35	.27	.30	.32	.47
Books, newspapers, etc	.99	.99	.68	.95	.91	1.32
Car fare	1.01	1.59	1.12	.55	1.14	1.65
Physician, drugs	.96	1.24	.98	79	1.04	1.52
Barber, baths	.38	.38	.34	.36	.37	.53
Insurance	2.43	3.20	1.26	1.49	2.23	3.22
Dues for societies	.43	.84	1.03	.90	.80	1.15
Amusement, sports	.48	.54	.55	.70	.53	.77
Gifts	1.29	2.52	2.26	.94	1.85	2.68
Wages, tips	.82	.80	.....	.40	.72	1.04
Miscellaneous	3.77	2.35	.55	1.32	2.27	3.28
Total	70.97	71.38	60.80	65.00	69.10	100.00

The average expenditures of a family of four persons of the income group of over 200 to 300 marks ($47.60 to $71.40) amounted to 290.35 marks ($69.10). Although this amount is not so large as the highest income within the income group considered, it nevertheless indicates that a number of families in this group had lived beyond their income from earnings. Deficits in the household budgets of these families, which must have occurred frequently, were probably covered through expenditure of previous savings or through contraction of debts. Expenditures for food, amounting to 157.08 marks ($37.39), formed more than half of the total expenditures. The expenditures for rent with 33.60 marks ($8), for clothing, etc., with 23.38 marks ($5.56), and heat and light with 11.69 marks ($2.78) were the next largest items in the order named. The disbursements for insurance and gifts of 9.35 and 7.79 marks ($2.23 and $1.85), respectively, were also relatively large.

Considered by occupations the data shown in Table 6 again indicate that workmen's families spend more for food than salaried employees' families, but less for rent, clothing, books and newspapers, and for insurance. That their expenditures for insurance are seemingly smaller is probably due to the fact that the insurance premiums are generally deducted from their wages. In spite of the fact that the income of the workmen's families included in the table is generally lower than that of the families of Government and private employees, the disbursements of the former for dues to societies are considerably larger than those of the latter.

The average monthly expenditures for food are shown in detail in the following table for the same families as are considered in the preceding table.

TABLE 7.—EXPENDITURES FOR AND CONSUMPTION OF FOOD DURING APRIL, 1916, OF SELECTED GERMAN FAMILIES OF FOUR PERSONS WITH A MONTHLY FAMILY INCOME OF OVER 200 TO 300 MARKS ($47.60 TO $71.40), BY OCCUPATIONS OF HEADS OF FAMILIES.

[The totals in this table are not always equal to the sum of the items, but they and the items are the exact equivalents of the figures in the original report. No explanation of the discrepancy is given.]

Item.	Medium-salaried Government employees (13 families).		Private salaried employees (20 families).		Workmen (13 families).		Occupation not stated (13 families).		Average (59 families).		
	Expenditure.	Consumption.	Expenditure.	Consumption.	Expenditure.	Consumption.	Expenditure.	Consumption.	Expenditure. Amount.	Expenditure. Per cent.	Consumption.
Food consumed in the household:		*Lbs.*		*Lbs.*		*Lbs.*		*Lbs.*			*Lbs.*
Bread, rolls, etc	$3.22	66.8	$3.12	71.6	$3.53	76.1	$3.61	92.9	$3.34	9.84	76.2
Other bakery goods, cakes, etc	.08	.....	.96	4.6	.84	.....	.44	2.1	.76	2.23	3.6
Flour, grits, farinaceous foods, etc	1.49	14.5	1.27	11.1	1.04	11.4	1.31	1.4	1.28	3.76	12.4
Potatoes	1.97	143.4	1.51	122.7	2.28	159.3	2.40	211.1	1.97	5.80	152.6
Butter lard, margarine, oil	3.93	7.2	3.82	8.2	4.58	9.6	4.27	7.6	4.11	12.12	7.9
Meat, sausage, ham, etc	7.23	16.9	6.54	12.0	6.55	12.7	7.05	11.5	6.69	19.69	13.1
Conserved meat	.71	2.6	1.09	3.8	1.12	.....	1.03	.....	.99	2.92	3.4
Fish, smoked and fresh; crabs, etc	.82	4.6	.87	7.3	.99	.....	.81	3.0	.87	2.57	5.0
Fish, canned	.28	.....	.50	.....	.....	.....	.....	.....	.40	1.18	.....
Eggs	2.15	[1] 36	.34	[1] 52	1.80	[1] 32	1.90	[1] 39	2.13	6.27	[1] 43
Milk, fresh	2.10	[2] 35.9	2.32	[2] 39.1	2.15	[2] 47.6	1.85	[2] 35.9	2.13	6.28	[2] 40.2
Milk, condensed	.36	.....	.58	.....	.....	.....	.....	.....	.48	1.42	.....
Cheese, cottage cheese, etc	.92	2.4	.89	3.9	.83	.....	1.03	4.0	.91	2.69	3.6
Vegetables, (fresh and dried); fruit	1.35	29.8	1.27	11.3	1.14	.....	1.70	17.6	1.37	4.05	16.8
Canned fruits and vegetables	.63	12.4	.61	5.6	.74	.....	.65	6.6	.65	1.92	7.0
Jam, preserved fruits, etc	.79	5.9	.95	7.2	.91	4.8	.95	8.3	.90	2.66	7.0
Sugar	.68	8.5	.72	10.5	.78	11.2	.78	11.7	.74	2.17	10.5
Cocoa, chocolate, sweets	.51	1.2	.63	1.1	.52	.....	.75	1.1	.62	1.82	1.1
Spices, salt, vinegar, lemons, etc	.91	.....	.62	.....	.42	.....	.59	.....	.63	1.86	.....
Coffee, pure and in mixtures	1.09	2.2	1.15	2.3	1.00	1.3	1.02	2.8	1.08	3.18	2.3
Coffee substitutes	.38	2.7	.34	3.4	.45	1.2	.46	5.3	.40	1.18	3.2
Nonalcoholic beverages, tea, etc	.64	.....	.45	.....	.37	.....	.33	.....	.46	1.35	.....
Food substitutes	.45	.....	.44	.....	.49	.....	.28	.....	.40	1.18	.....
Other foodstuffs	.94	.....	.67	.....	.43	.....	.33	.....	.63	1.86	.....
Total	33.65	.....	31.66	.....	32.95	.....	33.54	.....	33.95	100.00	.....
Alcohol, tobacco, cigars	1.39	.....	1.66	.....	1.61	.....	1.88	.....	1.62	.....	.....
Foods and beverages consumed away from home	1.57	.....	1.77	.....	1.74	.....	2.57	.....	1.81	.....	.....
Grand total	36.61	.....	35.09	.....	36.31	.....	37.99	.....	37.39	.....	.....

[1] Number. [2] Quarts.

Of the individual items of the average family expenditures for food shown in Table 7 those for meat and meat products (inclusive of conserved meat), amounting to 32.27 marks ($7.68), are much larger than the corresponding items in Table 5 for the next lowest income group. The average expenditures for bread and other bakery goods amounted to 17.22 marks ($4.10), and nearly the same amount, 17.27 marks ($4.11), was expended for butter and fats. The expenditure for potatoes, 8.28 marks ($1.97), is the same as in Table 5. The total

expenditure for preserved foods and food substitutes and "other foodstuffs" was 16.61 marks ($3.95) per family.

Of families with a monthly income of over 200 to 300 marks ($47.60 to $71.40) those of medium-salaried Government employees made the largest expenditures for fresh meat and the smallest expenditures for conserved meat. The expenditures for bread and rolls and fats and butter were largest in the case of workmen's families. Workmen's families also were the largest consumers of milk, but their expenditures for milk were smaller than those of the other occupational groups, which indicates that they must have consumed more skimmed milk than the latter. Of all occupational groups Government employees' families made the smallest expenditures for alcoholic beverages, tobacco, and meals in restaurants.

THE INVESTIGATION OF JULY, 1916.

In July, 1916, the War committee on consumers' interests made a second cost of living investigation. With the exception of a few unimportant alterations the schedule used was the same as that used in the April investigation. The same method of compilation was also employed, but only expenditures for food were considered, as it was rightly assumed that all other expenditures could not have undergone any noteworthy change during the relatively short period of three months. The schedules of 146 families with 644 persons and 601 units of consumption were included in the compilation. Most (101) of the households included were in large cities, 39 were in medium-sized, and only 6 in small cities. Only the following three income groups were considered:

100 to 200 marks ($23.80 to $47.60)	46 families.
Over 200 to 300 marks ($47.60 to $71.40)	50 families.
Over 300 marks ($71.40)	50 families.

According to the occupation of the head of the family the families included in the investigation were distributed as follows: Higher salaried Government employees, 22; medium-salaried Government employees, 36; private salaried employees, 31; workmen, 48; and free professions, 9. As in the April investigation, most of the families included, therefore, belonged to the middle classes.

Lack of space does not permit a reproduction in the MONTHLY REVIEW of the full results of this second investigation. For this reason it can only be mentioned here that the average expenditure per family for food was 43.19 marks ($10.28) in July, 1916, as against 39.04 marks ($9.29) in April, indicating an increase of 10.63 per cent for this three-month period.

WAGES AND HOURS OF LABOR IN THE IRON AND STEEL INDUSTRY, SEPTEMBER, 1917, COMPARED WITH MAY, 1915.

BY N. C. ADAMS.

The average earnings per hour of employees in the principal productive occupations of six departments of the iron and steel industry had increased, in September, 1917, as compared with May, 1915, as follows: In blast furnaces, 52 per cent; in Bessemer converters, 58 per cent; in open-hearth furnaces, 38 per cent; in blooming mills, 35 per cent; in plate mills, 50 per cent; and in sheet mills, 95 per cent. Full-time hours per week had changed very little in these 29 months, and full-time earnings per week had increased in the same proportions as the earnings per hour in four of the six departments, with an additional 3 per cent increase in the two remaining departments—open-hearth furnaces and sheet mills.

Many of the companies furnishing information for this report have notified the Bureau that they granted a further increase of 10 per cent in rates of pay to their employees in October, 1917, and it is believed that all of the companies represented joined in this additional increase. Hence the reader should bear in mind that even the very high figures here exhibited do not portray the full extent of the great increase in wages of iron and steel workers as a result of the War.

An additional evidence of the further increase in October, 1917, is furnished by the following statement prepared from figures in the February, 1918, issue of the MONTHLY REVIEW. The figures refer to entire plants instead of to selected departments as do the tables of this report, but the general trend is not especially disturbed by that fact. It will be seen that the index numbers for per capita earnings for the entire plants show an increase of 26 points, or 16 per cent, in October, 1917, as compared with the preceding month.

INDEX NUMBERS SHOWING VARIATIONS IN THE NUMBER OF PERSONS ON THE PAY ROLL, IN THE AMOUNTS OF SUCH PAY ROLLS, AND IN PER CAPITA EARNINGS—IRON AND STEEL.

[January, 1915 = 100.]

Date.	Number on pay roll.	Amount of pay roll.	Per capita earnings.
January, 1915	100	100	100
May, 1915	111	120	108
December, 1916	160	234	146
September, 1917	179	290	162
October, 1917	182	343	188

This bureau's latest bulletin on Wages and Hours of Labor in the Iron and Steel Industry (No. 218), issued in January, 1918, is a comprehensive study of general working conditions in the industry during the period extending from May, 1913, to June, 1915.

The three outstanding phases of that period were: First, the high rates of wages in May, 1913, which resulted from the industry's activities during the early part of that year; second, the steadily decreasing pay rolls of the remainder of 1913 and the entire year of 1914, the first year of the War; and, finally, the slowly improving conditions during the spring of 1915 resulting from the beginning of the War demands. Earnings per hour, however, in May, 1915, still were below those of May, 1913.

Bulletin 218 also presents some text and tabular statements compiled from issues of the MONTHLY REVIEW which clearly indicate the great increases in employment and in rates of pay which occurred between May, 1915, and December, 1916. The difference between the index numbers for per capita earnings for May, 1915, and December, 1916 (see preceding table), is 38, or an increase of 35 per cent for the latter month.

Bulletin 218 also contains a reference (October, 1917) to further increases shown by later data in the bureau's possession, but at that time uncompiled. The information referred to forms the basis of this brief report. It was furnished by various iron and steel companies in the United States and is for the pay-roll period ending September 15, 1917. It is presented here coupled, for the purpose of comparison, with similar data from identical plants, taken from the report for May, 1915 (Bulletin 218). A comparison between the index numbers for per capita earnings for May, 1915, and September, 1917, as shown in the preceding table, shows a gain of 54 points, or 50 per cent, in the last-named month.

This report embraces statistics for blast furnaces, Bessemer converters, open-hearth furnaces, blooming mills, plate mills, and sheet mills, so far as these departments are represented in sufficient numbers to form a basis for comparison, in the Eastern, Pittsburgh, Great Lakes and Middle West, and Southern districts of the United States. While the number of plants included is somewhat smaller than the number heretofore represented in the series of iron and steel wages bulletins, the report is sufficiently comprehensive to give a fair exposition of the phenomenal increases in earnings of iron and steel workers in 1917 as compared with 1915 and with pre-War periods.

Actual rates of wages per hour, full-time hours per week, and full-time earnings per week for the principal productive occupations of each of the six departments covered are shown in the table on pages 41 to 51, for identical plants, for September 15, 1917, and May 15, 1915.

These figures, together with similar figures for previous years taken from Bulletins 218, 168, and 151, are summarized in the form of relative numbers, which show the trend of wages and hours from year to year in each occupation and in each department as a whole. This table of relative numbers appears on pages 34 to 39, and the relatives for each department as a whole are reproduced in the table on page 32.

The heavy-faced figures of the following table are relative or index numbers and are simply percentages computed from the actual figures. In computing the index numbers the actual figures for 1913 are taken as the base, or 100 per cent; thus the facts for each other year reported are brought into direct comparison with the facts for the last complete year before the War.

Referring to the weekly-earnings column of the table for blast furnaces, it is seen that while such earnings in 1913 were higher than in any year of the period 1907 to 1915, inclusive, in 1917 they had increased 47 per cent as compared with 1913 and 52 per cent as compared with 1915. The greatest increase in weekly earnings is that shown for employees in sheet mills, whose weekly earnings in 1917 were 88 per cent higher than in the pre-War year 1913, 98 per cent higher than in 1915, and 119 per cent higher than in 1910. In computing the per cents of increase or decrease, other than those of each year with the year preceding, 1917 was used as a basis for comparison, as that is the first year shown in this report which reflects the very great War increases in rates and earnings.

RELATIVE FULL-TIME HOURS PER WEEK, WAGES PER HOUR, AND WEEKLY EARNINGS, TOGETHER WITH PER CENT OF INCREASE OR DECREASE, IN SPECIFIED YEARS, BY DEPARTMENTS.

[1913=100.]

Department and year.	Hours per week.			Wages per hour.			Weekly earnings.		
	Relative full-time hours per week.	Per cent of increase (+) or decrease (−) in— 1917 as compared with each specified year.	Per cent of increase (+) or decrease (−) in— Each specified year as compared with year preceding.	Relative rate of wages per hour.	Per cent of increase (+) or decrease (−) in— 1917 as compared with each specified year.	Per cent of increase (+) or decrease (−) in— Each specified year as compared with year preceding.	Relative full-time weekly earnings.	Per cent of increase (+) or decrease (−) in— 1917 as compared with each specified year.	Per cent of increase (+) or decrease (−) in— Each specified year as compared with year preceding.
Blast furnaces:									
1907	103	−6	.....	87	+ 75	.....	90	+ 63	.....
1908	101	−4	−2	83	+ 83	− 5	85	+ 73	− 6
1909	102	−5	+1	82	+ 85	− 1	84	+ 75	− 1
1910	103	−6	+1	89	+ 71	+ 9	91	+ 62	+ 8
1911	102	−5	−1	90	+ 69	+ 1	91	+ 62	(1)
1912	99	−2	−3	92	+ 65	+ 2	91	+ 62	(1)
1913	100	−3	+1	100	+ 52	+ 9	100	+ 47	+10
1914	97	(1)	−3	100	+ 52	(1)	97	+ 52	− 3
1915	97	(1)	(1)	100	+ 52	(1)	97	+ 52	(1)
1917	97	.....	(1)	152	.....	+52	147	.....	+52
Bessemer converters:									
1907	103	−1	.....	84	+ 65	.....	86	+ 65	.....
1908	99	+3	−4	78	+ 78	− 7	79	+ 80	− 8
1909	103	−1	+4	81	+ 72	+ 4	84	+ 69	+ 6
1910	103	−1	(1)	85	+ 64	+ 5	83	+ 61	+ 5
1911	101	+1	−2	81	+ 72	− 5	84	+ 69	− 5
1912	101	+1	(1)	90	+ 54	+11	90	+ 58	+ 7
1913	100	+2	−1	100	+ 39	+11	100	+ 42	+11
1914	100	+2	(1)	85	+ 64	−15	87	+ 63	−13
1915	100	+2	(1)	88	+ 58	+ 4	90	+ 58	+ 3
1917	102	.....	+2	139	.....	+58	142	.....	+58
Open-hearth furnaces:									
1910	99	(1)	.....	88	+ 61	.....	88	+ 59	.....
1911	97	+2	−2	88	+ 61	(1)	86	+ 63	− 2
1912	99	(1)	+2	92	+ 54	+ 5	91	+ 54	+ 6
1913	100	−1	+1	100	+ 42	+ 9	100	+ 40	+10
1914	97	+2	−3	99	+ 43	− 1	96	+ 46	− 4
1915	97	+2	(1)	103	+ 38	+ 4	99	+ 41	+ 3
1917	99	.....	+2	142	.....	+38	140	.....	+41
Blooming mills:									
1910	101	+1	.....	84	+ 52	.....	85	+ 51	.....
1911	100	(1)	−1	85	+ 51	+ 1	86	+ 49	+ 1
1912	100	(1)	(1)	90	+ 42	+ 6	90	+ 42	+ 5
1913	100	(1)	(1)	100	+ 28	+11	100	+ 28	+11
1914	98	+2	−2	96	+ 33	− 4	95	+ 35	− 5
1915	99	+1	+1	95	+ 35	− 1	95	+ 35	(1)
1917	100	.....	+1	128	.....	+35	128	.....	+35
Plate mills:									
1910	99	+2	.....	89	+ 70	.....	88	+ 70	.....
1911	99	+2	(1)	86	+ 76	− 3	84	+ 79	− 5
1912	100	+1	+1	92	+ 64	+ 7	91	+ 65	+ 8
1913	100	+1	(1)	100	+ 51	+ 9	100	+ 50	+10
1914	99	+2	−1	95	+ 59	− 5	95	+ 58	− 5
1915	99	+2	(1)	101	+ 50	+ 6	100	+ 50	+ 5
1917	101	.....	+2	151	.....	+50	150	.....	+50
Sheet mills:									
1910	101	+2	.....	86	+113	.....	86	+119	.....
1911	100	+3	−1	93	+ 97	+ 8	93	+102	+ 8
1912	100	+3	(1)	96	+ 91	+ 3	96	+ 96	+ 3
1913	100	+3	(1)	100	+ 83	+ 4	100	+ 88	+ 4
1914	100	+3	(1)	102	+ 79	+ 2	102	+ 84	+ 2
1915	100	+3	(1)	94	+ 95	− 8	95	+ 98	− 7
1917	103	.....	+3	183	.....	+95	188	.....	+98

[1] No change.

COMMON LABORERS.

The rate of wages paid common laborers is to a large extent a basic rate from which are determined the rates for other occupations requiring little skill, hence the rate for common labor is of importance beyond the limits of the occupation proper. The rate per hour of common labor is practically the same in all the departments of a plant, but the earnings per day or week, of course, are determined by the number of hours worked.

The following table shows, for each district, the average hourly rate paid to common laborers in each of the departments covered in this report.

AVERAGE RATES PER HOUR OF COMMON LABORERS IN EACH DEPARTMENT, BY DISTRICTS, 1915 AND 1917.

District and year.	All departments.	Blast furnaces.	Bessemer converters.	Open-hearth furnaces.	Blooming mills.	Plate mills.	Sheet mills.
Eastern:							
1915	$0.151	$0.157	.....	$0.151	$0.160	$0.147	.....
1917	.278	.271	.....	.287	.250	.250	.....
Pittsburgh:							
1915	.190	.186	$0.190	.198	.187	.188	$0.191
1917	.301	.292	.299	.300	.300	.300	.321
Great Lakes and Middle West:							
1915	.190	.195	.191	.192	.190	.187	.180
1917	.313	.296	.297	.299	.295	.289	.335
Southern:							
1915	.152	.148	.....	.158	.136	.....	.....
1917	.222	.226	.....	.221	.217	.....	.....
Total:							
1915	.184	.182	.190	.187	.182	.172	.186
1917	.298	.281	.298	.292	.287	.294	.331

INDEX NUMBERS.

Relative or index numbers for each of the principal productive occupations in each of the six departments covered by this report appear in the following pages, (34 to 39). As before stated these index numbers are simply percentages computed from the actual figures of earnings and hours, the figures for 1913, the last complete year before the War, being used as the base or 100 per cent.

Blast furnace employees with the exception of blowers are paid an hourly or a daily rate, and there is a decided uniformity in the increases in earnings of 1917 over 1913 as shown by the relative numbers. But in the other departments, with the exception of sheet mills, while the uniformity is still apparent in the relative numbers for laborers and other unskilled or semiskilled employees who, for by far the greater part, are paid time rates, there is a perceptibly smaller increase shown in the relative numbers for the highly skilled tonnage workers. Sheet mills on the other hand show a smaller increase in weekly earnings for laborers than for the very highly skilled other employees in the rolling gang. These laborers' earnings, however, show a greater relative increase than do laborers in any of the five other departments.

The increases for the sheet mill department are the greatest brought out by this report, weekly earnings for all occupations combined being 98 per cent higher in 1917 than in 1915.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS.

BLAST FURNACES.

[1913=100.]

Year.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Stockers.			Skip operators.			Iron handlers and loaders.		
1907	102	88	90	102	89	91	104	92	96
1908	99	81	81	102	85	87	105	91	95
1909	101	82	83	102	85	87	105	85	88
1910	101	86	87	102	91	92	104	93	97
1911	101	87	89	101	91	93	102	94	95
1912	100	90	90	96	95	99	101	94	94
1913	100	100	100	100	100	100	100	100	100
1914	96	99	95	96	100	96	99	98	97
1915	96	99	94	96	101	96	100	91	92
1917	99	157	154	93	154	143	100	137	138
	Bottom fillers.			Blowers.			Pig machine men.		
1907	103	92	94	102	88	90	103	86	89
1908	103	86	88	102	83	85	103	84	87
1909	103	80	81	102	84	86	103	84	86
1910	103	92	94	102	90	93	103	88	91
1911	103	90	92	101	93	95	101	88	89
1912	100	92	92	98	96	93	100	89	89
1913	100	100	100	100	100	100	100	100	100
1914	100	99	99	98	99	97	97	100	97
1915	99	101	99	98	100	98	97	99	97
1917	99	165	162	95	139	132	95	157	148
	Top fillers.			Blowing engineers.			Cindermen.		
1907	104	87	90	103	91	94	107	94	102
1908	104	82	85	103	89	91	106	85	91
1909	104	79	82	103	87	89	106	81	87
1910	104	88	92	103	92	95	107	90	97
1911	102	89	91	102	93	94	105	87	92
1912	100	92	91	99	95	93	97	91	87
1913	100	100	100	100	100	100	100	100	100
1914	99	99	97	97	100	96	97	97	94
1915	97	100	97	96	100	96	98	96	94
1917	97	146	140	93	148	138	97	151	147
	Larrymen.			Keepers.			Laborers.		
1907	102	88	90	103	91	94	106	84	90
1908	102	83	85	103	88	90	102	81	83
1909	102	84	86	103	86	88	102	80	82
1910	102	91	93	103	92	94	103	88	90
1911	101	90	91	101	93	94	101	88	90
1912	95	93	88	97	95	92	101	89	90
1913	100	100	100	100	100	100	100	100	100
1914	98	100	98	97	99	96	98	102	99
1915	96	99	94	97	99	95	98	98	96
1917	93	150	139	94	144	136	101	152	154

[1] Except 1916; no data for that year were gathered.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS—Continued.

BLAST FURNACES—Concluded.

Year	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Larrymen's helpers.			Keepers' helpers.			All occupations.		
1907	102	84	86	101	90	90	103	87	90
1908	102	81	82	101	87	87	101	83	85
1909	102	79	81	101	84	85	102	82	84
1910	102	86	88	101	92	93	103	89	91
1911	100	88	88	100	91	91	102	90	91
1912	96	91	87	98	93	90	99	92	91
1913	100	100	100	100	100	100	100	100	100
1914	95	99	94	98	100	97	97	100	97
1915	95	98	92	97	98	95	97	100	97
1917	92	153	140	95	153	144	97	152	147

BESSEMER CONVERTERS.

	Stockers.			Vesselmen's helpers.			Stopper setters.		
1907	100	73	74	105	103	109	102	111	111
1908	93	81	77	110	68	74	107	60	65
1909	102	78	79	110	88	97	110	97	103
1910	104	79	83	102	95	99	102	103	105
1911	99	69	70	104	79	82	107	89	92
1912	99	92	91	101	88	89	100	89	89
1913	100	100	100	100	100	100	100	100	100
1914	98	86	86	97	64	63	99	66	66
1915	98	77	77	99	72	72	101	74	76
1917	98	150	146	100	124	123	98	142	139
	Cupola melters.			Cinder pitmen.			Steel pourers.		
1907	106	106	113	103	84	85	103	106	107
1908	105	73	79	100	71	72	107	67	71
1909	105	87	93	103	73	76	107	88	93
1910	99	93	92	102	87	88	102	96	97
1911	105	81	87	105	82	87	101	83	82
1912	99	86	84	101	84	85	100	90	90
1913	100	100	100	100	100	100	100	100	100
1914	101	68	69	106	94	102	96	67	67
1915	100	79	78	106	94	103	98	79	80
1917	96	155	142	106	137	149	95	132	126
	Cupola tappers.			Bottom makers.			Mold cappers.		
1907	104	95	100	99	98	98	98	86	84
1908	101	84	89	98	72	71	97	49	50
1909	105	85	90	99	89	89	97	67	67
1910	101	91	92	100	90	90	99	81	80
1911	101	80	83	97	88	86	112	73	82
1912	102	94	94	98	90	89	103	84	85
1913	100	100	100	100	100	100	100	100	100
1914	100	60	62	99	76	76	102	70	74
1915	98	70	69	99	87	86	102	79	83
1917	95	147	134	97	148	145	94	148	138
	Blowers.			Bottom makers' helpers.			Ingot strippers.		
1907	104	102	105	101	93	94	97	92	85
1908	109	77	86	99	74	74	98	70	71
1909	109	80	88	100	85	85	101	78	79
1910	111	88	98	100	87	87	97	91	86
1911	114	83	95	99	86	86	101	84	84
1912	109	88	97	99	88	87	98	96	92
1913	100	100	100	100	100	100	100	100	100
1914	104	91	94	99	89	88	101	91	92
1915	103	94	98	100	94	94	101	97	98
1917	97	129	124	98	154	152	99	149	146

[1] Except 1916; no data for that year were gathered.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS—Continued.

BESSEMER CONVERTERS—Concluded.

Year.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Regulators, first.			Ladle liners.			Laborers.		
1907	99	93	93	95	112	106	104	81	85
1908	103	56	60	96	75	72	101	81	82
1909	103	73	78	95	96	92	102	79	81
1910	97	88	87	97	94	92	104	85	89
1911	105	81	85	99	85	84	99	87	87
1912	101	89	90	100	92	92	101	87	88
1913	100	100	100	100	100	100	100	100	100
1914	104	67	69	99	73	73	101	100	101
1915	105	72	76	99	82	82	101	100	101
1917	102	134	136	105	138	147	103	157	162
	Regulators, second.			Ladle liners' helpers.			All occupations.		
1907	104	101	105	98	99	95	103	84	86
1908	117	64	74	97	81	79	99	78	79
1909	118	87	101	98	89	87	103	81	84
1910	106	96	102	98	93	91	103	85	88
1911	102	84	85	99	91	91	101	81	84
1912	100	93	93	100	89	89	101	90	90
1913	100	100	100	100	100	100	100	100	100
1914	101	71	72	97	91	90	100	85	87
1915	101	80	82	98	96	94	100	88	90
1917	100	136	135	101	150	155	102	139	142
	Vesselmen.			Stopper markers.					
1907	106	101	107	103	104	107	.....	.....	.....
1908	111	67	75	103	73	75	.....	.....	.....
1909	111	80	89	101	88	90	.....	.....	.....
1910	102	90	94	103	86	90	.....	.....	.....
1911	105	76	79	102	90	92	.....	.....	.....
1912	102	93	94	100	90	89	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	98	66	67	99	84	83	.....	.....	.....
1915	98	73	75	98	88	86	.....	.....	.....
1917	108	119	128	97	137	132	.....	.....	.....

OPEN-HEARTH FURNACES.

	Stockers.			Melters' helpers, third.			Ingot strippers.		
1910	99	90	90	99	91	90	100	92	91
1911	96	87	83	96	86	82	97	86	83
1912	99	89	88	98	92	90	98	94	92
1913	100	100	100	100	100	100	100	100	100
1914	99	104	102	99	97	96	99	97	95
1915	99	101	100	100	99	99	99	100	100
1917	98	153	151	98	154	151	94	149	138
	Stock cranemen.			Stopper setters.			Laborers.		
1910	100	91	91	100	85	85	98	84	83
1911	96	84	81	96	85	83	96	87	83
1912	99	95	95	99	90	89	98	88	86
1913	100	100	100	100	100	100	100	100	100
1914	99	100	99	96	90	86	93	101	94
1915	98	107	105	96	93	88	95	101	96
1917	97	143	138	95	132	125	100	158	158

[1] Except 1916; no data for that year were gathered.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS—Continued.

OPEN-HEARTH FURNACES—Concluded.

Year.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Charging-machine operators.			Steel pourers.			All occupations.		
1910	99	88	87	99	90	88	99	88	88
1911	96	86	82	97	89	86	97	88	86
1912	97	93	91	99	91	90	99	92	91
1913	100	100	100	100	100	100	100	100	100
1914	99	92	91	99	92	90	97	99	96
1915	99	99	98	98	96	94	97	103	99
1917	99	131	128	99	120	118	99	142	140
	Melters' helpers, first.			Mold cappers.					
1910	101	95	96	101	86	87			
1911	98	91	89	98	86	83			
1912	100	95	94	100	89	88			
1913	100	100	100	100	100	100			
1914	97	96	93	98	91	89			
1915	97	100	97	96	99	95			
1917	99	127	126	97	137	135			
	Melters' helpers, second.			Ladle cranemen.					
1910	100	93	94	100	86	86			
1911	98	90	89	96	84	81			
1912	99	94	94	98	93	92			
1913	100	100	100	100	100	100			
1914	97	96	92	99	90	89			
1915	96	100	96	98	96	95			
1917	100	132	133	99	126	125			

BLOOMING MILLS.

	Pit cranemen.			Roll engineers.			Shearmen's helpers.		
1910	102	82	82	103	81	85	101	82	81
1911	100	81	80	103	80	84	99	81	80
1912	100	86	86	101	89	90	100	89	88
1913	100	100	100	100	100	100	100	100	100
1914	100	91	91	99	90	90	99	93	93
1915	100	96	95	98	95	95	99	94	93
1917	94	152	140	96	137	133	101	142	147
	Heaters.			Rollers.			Laborers.		
1910	100	86	85	103	83	87	101	87	88
1911	100	84	84	102	81	83	101	88	88
1912	100	91	91	100	90	90	101	89	89
1913	100	100	100	100	100	100	100	100	100
1914	99	86	86	99	90	90	99	101	100
1915	100	93	93	99	92	92	99	101	100
1917	89	130	118	97	123	121	101	159	160
	Heaters' helpers.			Manipulators.			All occupations.		
1910	101	88	87	103	84	88	101	84	85
1911	101	93	95	102	81	84	100	85	86
1912	101	90	91	101	90	90	100	90	90
1913	100	100	100	100	100	100	100	100	100
1914	99	94	92	98	90	89	98	96	95
1915	99	98	96	99	95	96	99	95	95
1917	77	162	131	96	149	144	100	128	128

[1] Except 1916; no data for that year were gathered.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS—Continued.

BLOOMING MILLS—Concluded.

Year.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Bottom makers.			Tablemen.					
1910	99	87	86	102	87	87	.....	.....	.....
1911	100	86	85	101	82	82	.....	.....	.....
1912	100	90	90	101	92	92	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	100	95	94	100	86	87	.....	.....	.....
1915	100	99	98	99	90	89	.....	.....	.....
1917	103	150	153	97	127	125	.....	.....	.....
	Bottom makers' helpers.			Shearmen.					
1910	100	91	90	101	81	82	.....	.....	.....
1911	100	88	88	100	82	83	.....	.....	.....
1912	100	93	93	100	88	88	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	99	98	97	98	89	87	.....	.....	.....
1915	100	97	97	99	93	92	.....	.....	.....
1917	103	142	146	101	133	134	.....	.....	.....

PLATE MILLS.

	Charging-crane and charging-machine operators.			Screwmen.			Shearmen's helpers.		
1910	103	88	91	100	85	84	100	86	85
1911	99	82	82	100	79	79	100	83	82
1912	99	92	91	100	90	90	100	89	89
1913	100	100	100	100	100	100	100	100	100
1914	99	89	89	99	87	87	99	96	96
1915	100	90	90	99	95	95	100	103	103
1917	99	141	141	100	135	136	100	162	162
	Heaters.			Table operators.			Laborers.		
1910	101	91	92	100	86	86	97	88	86
1911	98	84	82	100	81	81	96	88	84
1912	99	92	90	100	93	92	99	89	89
1913	100	100	100	100	100	100	100	100	100
1914	100	93	93	99	89	89	99	99	99
1915	100	97	98	99	93	93	98	99	97
1917	96	134	129	101	143	144	104	170	176
	Heaters' helpers.			Hookmen.			All occupations.		
1910	103	95	97	100	84	83	99	89	88
1911	100	89	88	100	79	78	99	86	84
1912	100	96	96	100	89	88	100	92	91
1913	100	100	100	100	100	100	100	100	100
1914	100	95	93	99	88	88	99	95	95
1915	100	101	101	99	95	94	99	101	100
1917	99	186	185	101	148	148	101	151	150
	Roll engineers.			Roll hands, other.					
1910	100	96	95	99	91	89	.....	.....	.....
1911	99	93	91	100	83	83	.....	.....	.....
1912	100	93	93	100	96	96	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	97	99	96	99	93	93	.....	.....	.....
1915	97	100	96	99	97	97	.....	.....	.....
1917	98	151	147	101	142	144	.....	.....	.....

[1] Except 1916; no data for that year were gathered.

RELATIVE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1907 TO 1917,[1] BY OCCUPATIONS—Concluded.

PLATE MILLS—Concluded.

Year.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.	Full-time hours per week.	Rate of wages per hour.	Full-time weekly earnings.
	Rollers.			Shearmen.					
1910	100	97	96	98	91	89	.....	.....	.....
1911	100	83	82	99	86	85	.....	.....	.....
1912	100	99	99	99	93	93	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	99	92	92	99	97	96	.....	.....	.....
1915	99	96	96	99	104	102	.....	.....	.....
1917	100	136	137	102	154	155	.....	.....	.....

SHEET MILLS.

	Pair heaters.			Doublers.			Openers.		
1910	100	86	86	100	85	85	102	93	95
1911	100	93	93	100	92	91	100	94	94
1912	100	95	95	100	94	94	101	98	99
1913	100	100	100	100	100	100	100	100	100
1914	100	99	99	100	107	107	100	97	97
1915	100	95	95	100	105	105	102	94	96
1917	102	198	202	102	217	222	103	232	240
	Rollers.			Sheet heaters.			Laborers.		
1910	100	87	87	100	92	92	98	85	84
1911	100	96	96	100	95	95	98	86	85
1912	100	99	99	100	99	99	98	88	87
1913	100	100	100	100	100	100	100	100	100
1914	100	97	97	100	97	97	102	100	101
1915	100	87	87	100	87	87	100	100	100
1917	102	184	188	102	186	190	94	178	168
	Roughers.			Sheet heaters' helpers.			All occupations.		
1910	100	86	86	100	74	74	101	86	86
1911	100	93	93	100	85	85	100	93	93
1912	100	95	95	100	86	86	100	96	96
1913	100	100	100	100	100	100	100	100	100
1914	100	100	100	100	102	102	100	102	102
1915	100	96	96	100	97	97	100	94	95
1917	102	204	208	100	199	201	103	183	188
	Catchers.			Shearmen.					
1910	100	85	85	102	85	84	.....	.....	.....
1911	100	92	92	100	89	90	.....	.....	.....
1912	100	95	95	100	94	95	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	100	100	100	100	103	103	.....	.....	.....
1915	100	94	94	100	99	99	.....	.....	.....
1917	102	199	203	101	169	172	.....	.....	.....
	Matchers.			Shearmen's helpers.					
1910	100	86	86	103	90	93	.....	.....	.....
1911	100	93	93	100	106	106	.....	.....	.....
1912	100	95	95	100	100	100	.....	.....	.....
1913	100	100	100	100	100	100	.....	.....	.....
1914	100	107	107	100	115	116	.....	.....	.....
1915	100	105	105	102	99	101	.....	.....	.....
1917	102	219	224	103	219	225	.....	.....	.....

[1] Except 1916; no data for that year were gathered.

The working time of employees, as shown in the following table of average hours and wages, is not always the working time of their occupation as a whole. Some plants make provision for laying off one day a week each employee working in a department which operates seven days per week, as blast furnaces, for example. In such plants the full-time hours per week of an employee working 12 hours a day is 72 hours. In a plant making no such provision, the full-time hours per week of an employee working 12 hours a day is 84 hours.

In the 18 blast furnaces covered by this report 56 per cent of the employees shown worked 7 days per week in 1915 and 8 per cent 6 and 7 days alternately, while only 50 per cent worked 7 days in 1917, and 6 per cent worked 6 and 7 days alternately. The remaining 36 per cent in 1915 and 44 per cent in 1917 worked 6 days. This shows a reduction of 6 per cent in the number of 7-day workers between May 15, 1915, and September 15, 1917, and is a reduction of 47 per cent between May 15, 1907, when 97 per cent of the blast furnace employees reported worked 7 days each week, and September 15, 1917.

The rates of wages per hour appearing in the table include both the wages of time workers and the earnings of tonnage or piece workers. All time rates by the day or week have been reduced to rates per hour. The earnings of tonnage workers, the earnings of employees working at both time and tonnage rates, and the earnings of employees who, in addition to a regular time rate, receive a bonus based on production, also have been reduced to earnings per hour by dividing the earnings by the hours worked. The time workers and tonnage workers of each occupation are combined as one group.

In this connection it should be noted that while in other industries the earnings of employees paid on a piecework basis usually are proportionate to the exertion and skill of the individual employee, in the iron and steel industry the earnings of tonnage workers depend upon the production of an entire department or group of employees.

The average rates of wages per hour given are true averages. In the majority of cases the very great variation in the rates of a district are the results of a variation in the custom of working two or three shifts per day. Employees who are put on a three-shift (8 hour) basis naturally demand an hourly rate which will approximately equalize their daily earnings with those of men on a two-shift (12 hour) basis.

Average weekly earnings also are true averages, aggregate weekly earnings having been computed for employees of each plant separately, and the total, for all plants combined, divided by the total number of employees. Multiplying the average hours per week by the average rate per hour will not always give the same average

weekly earnings as the true average, especially in cases where there are extreme variations between the several plants in either rates or hours.

Rates of pay are highest usually in the Pittsburgh and Great Lakes and Middle West districts, and in general it appears that there is a great similarity between rates in these two districts. Rates in the Eastern district are decidedly lower and those in the Southern district as a whole still lower.

One general exception, however, should be noted for the Southern district. The rates of some highly skilled occupations are as high as in any of the other districts. The reason for this condition is said to be that employees in these occupations, for a large part, are brought from the northern districts and will not accept a lower rate than they formerly received, and in some cases will not go to the warmer climate, to which they are not accustomed, unless they are given a higher rate even than that paid in the Pittsburgh or the Great Lakes district. On the other hand, occupations requiring little skill, including common laborers, are recruited to a great extent from the Negroes, who are paid less than the whites in the same occupation.

The lower rates paid in the Eastern district are in a measure due to the fact that many of the plants are located in small cities and towns where living costs, especially housing, are less than in the congested centers of the Pittsburgh and Great Lakes districts.

The table of average earnings and hours for the principal productive occupations in each department follows:

AVERAGE FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917.

BLAST FURNACES.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Stockers.					
Eastern:					
2 plants	1915	36	68.3	$0.148	$10.06
	1917	71	73.9	.272	20.06
Pittsburgh:					
4 plants	1915	269	75.7	.195	14.75
	1917	218	81.8	.301	24.63
Great Lakes and Middle West:					
4 plants	1915	88	72.8	.198	14.40
	1917	97	72.0	.324	23.35
Southern:					
4 plants	1915	59	77.8	.154	12.01
	1917	55	74.2	.246	18.02
Total:					
14 plants	1915	452	74.8	.186	13.95
	1917	441	77.4	.295	22.79
Bottom fillers.					
Eastern:					
1 plant	1915	36	84.0	$0.172	$14.41
	1917	44	84.0	.285	23.94
Southern:					
2 plants	1915	10	84.0	.139	11.64
	1917	12	84.0	.215	18.06
Total:					
3 plants	1915	46	84.0	.164	13.81
	1917	56	84.0	.270	22.68
Top fillers.					
Eastern:					
1 plant	1915	10	84.0	.200	16.80
	1917	16	84.0	.275	23.10

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

BLAST FURNACES—Continued.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Top fillers—Concluded.					
Southern:					
2 plants	1915	6	84.0	$0.139	$11.68
	1917	6	84.0	.208	17.50
Total:					
3 plants	1915	16	84.0	.177	14.88
	1917	22	84.0	.257	21.57
Larrymen.					
Eastern:					
1 plant	1915	2	84.0	.175	14.70
	1917	5	84.0	.290	24.36
Pittsburgh:					
5 plants	1915	66	81.2	.222	18.04
	1917	68	81.2	.333	27.10
Great Lakes and Middle West:					
5 plants	1915	46	74.1	.238	17.68
	1917	84	73.1	.352	25.73
Southern:					
3 plants	1915	26	84.0	.160	13.41
	1917	26	78.5	.235	18.23
Total:					
14 plants	1915	140	79.4	.215	17.01
	1917	183	77.2	.327	25.14
Larrymen's helpers.					
Eastern:					
1 plant	1915	2	84.0	.150	12.60
	1917	11	84.0	.270	22.68
Pittsburgh:					
5 plants	1915	90	81.9	.193	15.83
	1917	90	81.9	.299	24.52
Great Lakes and Middle West:					
4 plants	1915	26	78.5	.190	14.97
	1917	44	75.3	.306	23.03
Southern:					
2 plants	1915	16	84.0	.154	12.94
	1917	16	75.0	.224	16.55
Total:					
12 plants	1915	134	81.5	.187	15.27
	1917	161	79.6	.292	23.20
Skip operators.					
Eastern:					
1 plant	1915	2	84.0	.175	14.70
	1917	4	84.0	.290	24.36
Pittsburgh:					
5 plants	1915	50	80.2	.239	19.14
	1917	54	79.6	.357	28.38
Great Lakes and Middle West:					
4 plants	1915	26	75.7	.234	17.81
	1917	40	73.8	.365	26.93
Southern:					
3 plants	1915	20	84.0	.182	15.31
	1917	20	76.8	.274	21.09
Total:					
13 plants	1915	98	79.9	.224	17.91
	1917	118	77.3	.343	26.52
Blowers.					
Eastern:					
3 plants	1915	8	81.0	$0.309	$24.87
	1917	10	79.2	.415	32.99
Pittsburgh:					
5 plants	1915	37	81.2	.356	28.72
	1917	31	80.2	.488	39.16
Great Lakes and Middle West:					
5 plants	1915	21	76.0	.400	30.00
	1917	25	72.5	.561	40.63
Southern:					
5 plants	1915	18	84.0	.288	24.18
	1917	18	80.0	.415	32.83
Total:					
18 plants	1915	84	80.5	.348	27.82
	1917	84	77.8	.485	37.50
Blowing engineers.					
Eastern:					
3 plants	1915	8	81.0	.210	17.05
	1917	16	82.5	.331	27.36
Pittsburgh:					
5 plants	1915	28	80.3	.293	23.56
	1917	28	78.9	.417	32.81
Great Lakes and Middle West:					
5 plants	1915	37	73.9	.273	20.20
	1917	60	72.4	.419	30.33
Southern:					
5 plants	1915	18	84.0	.220	18.44
	1917	18	78.7	.310	24.23
Total:					
18 plants	1915	91	78.5	.263	20.61
	1917	122	76.1	.391	29.61
Keepers.					
Eastern:					
3 plants	1915	3	81.0	.201	16.27
	1917	18	81.3	.308	25.04
Pittsburgh:					
5 plants	1915	54	80.1	.257	20.54
	1917	58	80.4	.372	29.86
Great Lakes and Middle West:					
5 plants	1915	36	74.7	.248	18.53
	1917	62	73.2	.361	26.41
Southern:					
5 plants	1915	23	84.0	.179	15.08
	1917	24	78.0	.258	20.00
Total:					
18 plants	1915	121	79.3	.236	18.62
	1917	162	77.4	.344	26.55
Keepers' helpers.					
Eastern:					
3 plants	1915	28	81.4	.168	13.70
	1917	52	81.7	.274	22.35
Pittsburgh:					
5 plants	1915	174	79.6	.208	16.53
	1917	132	79.2	.319	25.27
Great Lakes and Middle West:					
5 plants	1915	112	75.0	.205	15.35
	1917	122	73.2	.320	23.38

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

BLAST FURNACES—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Keepers' helpers—Concluded.					
Southern:					
5 plants	1915	100	84.0	$0.142	$11.91
	1917	86	79.0	.223	17.49
Total:					
18 plants	1915	414	79.5	.188	14.91
	1917	392	77.6	.292	22.59
Iron handlers and loaders.					
Eastern:					
1 plant	1915	3	60.0	.185	11.10
	1917	6	72.0	.242	17.43
Southern:					
3 plants	1915	59	71.9	.161	11.60
	1917	100	71.4	.244	17.44
Total:					
4 plants	1915	62	71.3	.162	11.57
	1917	106	71.4	.243	17.44
Pig machine men.					
Eastern:					
1 plant	1915	8	84.0	.156	13.10
	1917	10	84.0	.260	21.84
Pittsburgh:					
3 plants	1915	69	82.3	.192	15.81
	1917	30	83.3	.294	24.47
Great Lakes and Middle West:					
5 plants	1915	42	75.4	.202	15.27
	1917	97	74.5	.321	23.87
Southern:					
1 plant	1915	8	84.0	.125	10.50
	1917	8	84.0	.163	13.69
Total:					
10 plants	1915	127	80.2	.189	15.12
	1917	154	77.9	.300	23.21
Cindermen.					
Eastern:					
2 plants	1915	7	78.9	$0.152	$11.99
	1917	12	78.0	.256	19.96
Pittsburgh:					
3 plants	1915	78	78.0	.192	14.92
	1917	54	81.8	.305	24.95
Great Lakes and Middle West:					
4 plants	1915	44	79.5	.192	15.25
	1917	68	73.1	.311	22.68
Southern:					
4 plants	1915	27	82.4	.135	11.09
	1917	34	84.0	.217	18.20
Total:					
13 plants	1915	156	79.2	.181	14.22
	1917	168	78.4	.286	22.31
Laborers.					
Eastern:					
3 plants	1915	21	62.8	.157	9.88
	1917	101	62.4	.271	16.84
Pittsburgh:					
5 plants	1915	197	76.3	.186	14.23
	1917	366	82.3	.292	24.04
Great Lakes and Middle West:					
5 plants	1915	190	69.2	.195	13.46
	1917	139	70.2	.296	20.77
Southern:					
4 plants	1915	88	77.7	.148	11.50
	1917	92	69.4	.226	15.55
Total:					
17 plants	1915	496	73.3	.182	13.26
	1917	698	75.3	.281	21.23

BESSEMER CONVERTERS.

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Stockers.					
Pittsburgh:					
2 plants	1915	84	52.3	$0.317	$16.06
	1917	112	50.6	.659	32.47
Great Lakes and Middle West:					
1 plant	1915	19	71.4	.264	18.83
	1917	32	72.0	.387	27.86
Total:					
3 plants	1915	103	55.8	.307	16.57
	1917	144	55.3	.569	31.45
Cupola melters.					
Pittsburgh:					
2 plants	1915	5	59.0	.371	21.76
	1917	5	57.6	.866	49.07
Great Lakes and Middle West:					
1 plant	1915	2	78.0	.417	32.53
	1917	2	72.0	.495	35.64
Total:					
3 plants	1915	7	64.4	.384	24.83
	1917	7	61.7	.760	45.24
Cupola tappers.					
Pittsburgh:					
1 plant	1915	12	50.3	$0.319	$16.00
	1917	12	48.0	.773	37.16
Great Lakes and Middle West:					
1 plant	1915	4	72.0	.324	23.53
	1917	4	72.0	.390	28.08
Total:					
2 plants	1915	16	55.8	.320	17.87
	1917	16	54.0	[illegible]	34.85
Blowers.					
Pittsburgh:					
5 plants	1915	11	65.5	.560	36.48
	1917	12	60.0	.825	47.94
Great Lakes and Middle West:					
3 plants	1915	6	72.5	.582	42.27
	1917	6	72.0	.700	50.42
Total:					
8 plants	1915	17	68.0	.568	38.52
	1917	18	64.0	.784	48.77

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

BESSEMER CONVERTERS—Continued.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Regulators, first.					
Pittsburgh:					
5 plants	1915	11	67.3	$0.311	$21.43
	1917	11	64.0	.665	43.05
Great Lakes and Middle West:					
3 plants	1915	7	72.4	.374	27.11
	1917	6	72.0	.568	40.87
Total:					
8 plants	1915	18	69.3	.336	23.64
	1917	17	66.8	.630	42.28
Regulators, second.					
Pittsburgh:					
5 plants	1915	11	65.4	.285	19.11
	1917	11	64.0	.604	39.11
Great Lakes and Middle West:					
3 plants	1915	8	72.4	.328	23.76
	1917	8	72.0	.395	28.44
Total:					
8 plants	1915	19	68.3	.303	21.06
	1917	19	67.4	.516	34.62
Vesselmen.					
Pittsburgh:					
5 plants	1915	14	53.5	.547	29.51
	1917	14	50.3	1.041	51.22
Great Lakes and Middle West:					
3 plants	1915	7	62.1	.554	34.18
	1917	16	72.0	.765	55.11
Total:					
8 plants	1915	21	56.4	.550	31.07
	1917	30	61.9	.894	53.29
Vesselmen's helpers.					
Pittsburgh:					
5 plants	1915	25	53.1	.374	19.64
	1917	31	49.5	.731	36.46
Great Lakes and Middle West:					
3 plants	1915	17	59.8	.382	23.05
	1917	14	72.0	.483	34.78
Total:					
8 plants	1915	42	55.8	.377	21.02
	1917	45	56.5	.654	35.94
Cinder pitmen.					
Pittsburgh:					
3 plants	1915	20	72.3	.219	15.82
	1917	42	72.0	.321	23.12
Great Lakes and Middle West:					
2 plants	1915	6	72.0	.238	17.14
	1917	20	72.0	.333	23.99
Total:					
5 plants	1915	26	72.2	.223	16.13
	1917	62	72.0	.325	23.40
Bottom makers.					
Pittsburgh:					
5 plants	1915	10	74.5	$0.275	$20.16
	1917	10	72.0	.566	40.75
Great Lakes and Middle West:					
3 plants	1915	5	72.0	.348	25.08
	1917	6	72.0	.417	30.02
Total:					
8 plants	1915	15	73.7	.299	21.80
	1917	16	72.0	.510	36.73
Bottom makers' helpers.					
Pittsburgh:					
5 plants	1915	18	73.4	.217	15.81
	1917	20	72.0	.397	28.55
Great Lakes and Middle West:					
3 plants	1915	8	72.0	.261	18.76
	1917	10	72.0	.338	24.31
Total:					
8 plants	1915	26	73.0	.230	16.71
	1917	30	72.0	.377	27.13
Ladle liners.					
Pittsburgh:					
5 plants	1915	10	72.1	.292	21.03
	1917	10	72.0	.589	42.42
Great Lakes and Middle West:					
3 plants	1915	8	61.9	.419	26.06
	1917	5	69.6	.570	39.51
Total:					
8 plants	1915	18	67.6	.348	23.26
	1917	15	71.2	.583	41.45
Ladle liners' helpers.					
Pittsburgh:					
5 plants	1915	18	71.8	.217	15.59
	1917	18	72.0	.398	28.65
Great Lakes and Middle West:					
3 plants	1915	10	63.9	.259	15.80
	1917	16	70.5	.329	23.08
Total:					
8 plants	1915	28	69.0	.232	15.66
	1917	34	71.3	.365	26.03
Stopper makers.					
Pittsburgh:					
5 plants	1915	5	67.2	.259	16.98
	1917	6	65.0	.434	27.85
Great Lakes and Middle West:					
3 plants	1915	3	72.0	.307	22.10
	1917	4	72.0	.432	31.09
Total:					
8 plants	1915	8	69.0	.277	18.90
	1917	10	67.8	.433	29.15

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

BESSEMER CONVERTERS—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Stopper setters.					
Pittsburgh:					
5 plants	1915	24	48.0	$0.403	$19.34
	1917	24	46.7	.851	40.04
Great Lakes and Middle West:					
3 plants	1915	7	62.1	.498	30.42
	1917	16	54.0	.761	40.01
Total:					
8 plants	1915	31	51.2	.424	21.84
	1917	40	49.6	.815	40.03
Steel pourers.					
Pittsburgh:					
5 plants	1915	15	48.1	.508	24.44
	1917	15	46.3	.982	46.41
Great Lakes and Middle West:					
3 plants	1915	9	64.3	.512	33.11
	1917	12	60.0	.682	40.13
Total:					
8 plants	1915	24	54.2	.510	27.69
	1917	27	52.7	.849	43.62
Mold cappers.					
Pittsburgh:					
4 plants	1915	11	52.5	.317	16.02
	1917	23	50.1	.680	33.28
Mold cappers—Concluded.					
Great Lakes and Middle West:					
1 plant	1915	6	72.0	$0.377	$27.11
	1917	6	72.0	.444	31.97
Total:					
5 plants	1915	17	59.4	.338	19.93
	1917	29	54.6	.631	33.01
Ingot strippers.					
Pittsburgh:					
5 plants	1915	13	69.2	.320	21.44
	1917	23	67.2	.514	33.02
Great Lakes and Middle West:					
3 plants	1915	8	72.4	.294	21.23
	1917	10	72.0	.399	28.70
Total:					
8 plants	1915	21	70.4	.310	21.35
	1917	33	68.7	.479	31.71
Laborers.					
Pittsburgh:					
5 plants	1915	207	72.2	.190	13.73
	1917	427	73.8	.299	22.07
Great Lakes and Middle West:					
3 plants	1915	44	71.3	.191	13.61
	1917	66	70.5	.297	20.93
Total:					
8 plants	1915	251	72.0	.190	13.71
	1917	493	73.4	.298	21.92

OPEN-HEARTH FURNACES.

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Stockers.					
Eastern:					
2 plants	1915	26	81.7	$0.178	$14.52
	1917	40	80.4	.284	22.78
Pittsburgh:					
3 plants	1915	42	76.4	.211	16.19
	1917	46	80.5	.320	25.78
Great Lakes and Middle West:					
5 plants	1915	92	77.0	.201	15.43
	1917	114	74.3	.317	23.56
Southern:					
3 plants	1915	23	82.4	.161	13.29
	1917	43	79.7	.226	18.30
Total:					
13 plants	1915	183	78.2	.195	15.21
	1917	243	77.4	.296	22.92
Stock cranemen.					
Eastern:					
2 plants	1915	8	81.0	.193	15.64
	1917	14	79.7	.293	23.31
Pittsburgh:					
3 plants	1915	12	76.9	.251	19.41
	1917	14	80.4	.381	30.84
Stock cranemen—Concluded.					
Great Lakes and Middle West:					
4 plants	1915	26	76.6	$0.280	$21.83
	1917	30	74.4	.351	26.04
Southern:					
2 plants	1915	4	81.0	.214	17.25
	1917	6	80.0	.275	21.99
Total:					
11 plants	1915	50	77.7	.254	19.89
	1917	64	77.4	.338	26.11
Charging-machine operators.					
Eastern:					
2 plants	1915	6	82.0	.254	20.72
	1917	10	80.4	.386	30.81
Pittsburgh:					
3 plants	1915	14	74.6	.334	24.94
	1917	16	78.0	.492	38.57
Great Lakes and Middle West:					
5 plants	1915	22	76.4	.418	32.00
	1917	28	74.6	.474	35.34

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

OPEN-HEARTH FURNACES—Continued.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Charging-machine operators—Concld.					
Southern:					
3 plants	1915	8	82.5	$0.290	$23.87
	1917	10	79.2	.485	38.34
Total:					
13 plants	1915	50	77.5	.354	27.37
	1917	64	77.1	.467	35.91
Melters' helpers, first.					
Eastern:					
2 plants	1915	20	84.0	.322	27.01
	1917	30	84.0	.461	38.72
Pittsburgh:					
3 plants	1915	68	77.4	.463	35.84
	1917	76	75.2	.593	44.37
Great Lakes and Middle West:					
5 plants	1915	126	69.7	.492	34.36
	1917	130	74.2	.612	45.16
Southern:					
3 plants	1915	26	82.6	.420	34.56
	1917	36	80.0	.580	46.14
Total:					
13 plants	1915	240	74.5	.462	34.20
	1917	272	76.3	.586	44.36
Melters' helpers, second.					
Eastern:					
2 plants	1915	20	81.0	.230	18.59
	1917	30	80.4	.324	25.96
Pittsburgh:					
3 plants	1915	68	73.8	.324	23.88
	1917	76	75.2	.424	31.76
Great Lakes and Middle West:					
5 plants	1915	124	69.7	.313	21.52
	1917	130	74.2	.419	30.88
Southern:					
3 plants	1915	26	82.6	.234	19.35
	1917	36	80.0	.325	25.93
Total:					
13 plants	1915	238	73.2	.301	21.71
	1917	272	75.9	.397	29.93
Melters' helpers, third.					
Eastern:					
1 plant	1915	10	78.0	.182	14.20
	1917	18	78.0	.300	23.40
Pittsburgh:					
3 plants	1915	72	75.7	.245	18.50
	1917	76	76.7	.350	26.77
Great Lakes and Middle West:					
4 plants	1915	116	81.6	.207	16.84
	1917	138	77.2	.333	25.59
Southern:					
3 plants	1915	49	78.6	.175	13.89
	1917	36	80.0	.272	21.72
Total:					
11 plants	1915	247	79.1	.211	16.63
	1917	268	77.5	.328	25.26
Stopper setters.					
Pittsburgh:					
2 plants	1915	8	72.0	$0.334	$24.07
	1917	8	73.5	.423	31.00
Great Lakes and Middle West:					
4 plants	1915	10	76.8	.286	21.85
	1917	24	75.0	.408	30.27
Southern:					
2 plants	1915	4	81.0	.220	17.78
	1917	4	81.0	.432	34.52
Total:					
8 plants	1915	22	75.7	.291	21.91
	1917	36	75.3	.411	30.90
Steel pourers.					
Eastern:					
1 plant	1915	2	78.0	.365	28.47
	1917	4	78.0	.467	36.43
Pittsburgh:					
3 plants	1915	12	75.1	.361	27.48
	1917	12	77.0	.580	44.87
Great Lakes and Middle West:					
5 plants	1915	16	75.0	.384	28.76
	1917	24	71.0	.435	31.89
Southern:					
3 plants	1915	10	75.6	.380	28.85
	1917	8	79.5	.465	36.93
Total:					
12 plants	1915	40	75.8	.375	28.34
	1917	48	76.0	.466	35.60
Mold cappers.					
Eastern:					
1 plant	1915	4	84.0	.190	15.96
	1917	2	84.0	.280	23.52
Pittsburgh:					
3 plants	1915	18	76.1	.251	19.08
	1917	20	79.8	.389	31.40
Great Lakes and Middle West:					
2 plants	1915	16	73.5	.295	21.57
	1917	16	72.0	.342	24.63
Total:					
6 plants	1915	38	75.8	.263	19.80
	1917	38	76.7	.364	28.16
Ladle cranemen.					
Eastern:					
2 plants	1915	6	82.0	.269	21.93
	1917	10	80.4	.396	31.65
Pittsburgh:					
3 plants	1915	18	71.1	.342	25.51
	1917	20	76.8	.489	37.91
Great Lakes and Middle West:					
5 plants	1915	27	76.0	.399	30.36
	1917	38	73.9	.464	34.31
Southern:					
3 plants	1915	10	75.6	.325	24.42
	1917	14	79.7	.490	38.84
Total:					
13 plants	1915	61	76.0	.357	27.13
	1917	82	76.4	.466	35.64

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

OPEN-HEARTH FURNACES—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Ingot strippers.					
Eastern:					
2 plants	1915	8	78.8	$0.226	$17.573
	1917	6	82.0	.321	26.24
Pittsburgh:					
3 plants	1915	9	67.4	.386	25.38
	1917	13	59.1	.563	32.15
Great Lakes and Middle West:					
5 plants	1915	11	77.5	.312	24.07
	1917	14	73.7	.400	29.69
Southern:					
3 plants	1915	6	78.0	.258	19.87
	1917	6	79.5	.446	35.35
Total:					
13 plants	1915	34	75.2	.302	22.18
	1917	39	70.9	.449	30.85
Laborers.					
Eastern:					
2 plants	1915	10	77.7	$0.151	$11.78
	1917	135	68.4	.287	19.44
Pittsburgh:					
3 plants	1915	146	72.8	.198	14.45
	1917	211	78.2	.300	23.46
Great Lakes and Middle West:					
5 plants	1915	221	72.0	.192	13.81
	1917	267	75.6	.299	22.60
Southern:					
3 plants	1915	93	63.4	.158	9.99
	1917	40	66.9	.221	14.52
Total:					
13 plants	1915	470	70.6	.187	13.21
	1917	653	74.4	.292	21.73

BLOOMING MILLS.

Occupation, district, and number of plants.	Year.	Number of employees.	Average full time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Pit cranemen.					
Eastern:					
1 plant	1915	4	72.0	$0.204	$14.67
	1917	4	78.0	.443	34.55
Pittsburgh:					
5 plants	1915	22	66.0	.384	25.18
	1917	34	59.8	.607	35.06
Great Lakes and Middle West:					
4 plants	1915	15	75.2	.312	23.33
	1917	25	69.1	.464	31.55
Southern:					
2 plants	1915	6	72.0	.370	26.69
	1917	8	76.5	.599	45.97
Total:					
12 plants	1915	47	70.2	.344	23.89
	1917	71	66.0	.546	35.02
Heaters.					
Eastern:					
1 plant	1915	2	72.0	.375	27.00
	1917	2	78.0	.584	45.55
Pittsburgh:					
5 plants	1915	15	70.0	.592	41.35
	1917	25	58.2	.790	46.73
Great Lakes and Middle West:					
4 plants	1915	12	75.0	.490	36.47
	1917	16	72.0	.689	49.62
Southern:					
2 plants	1915	4	84.0	.567	47.61
	1917	4	81.0	.902	72.37
Total:					
12 plants	1915	33	73.7	.539	39.46
	1917	47	65.7	.756	49.85
Heaters' helpers.					
Pittsburgh:					
1 plant	1915	4	75.5	.325	24.50
	1917	9	48.0	.530	25.44
Great Lakes and Middle West:					
1 plant	1915	1	84.0	.300	25.20
	1917	2	72.0	.565	40.68
Heaters' helpers—Concluded.					
Southern:					
1 plant	1915	2	72.0	$0.492	$35.42
	1917	4	78.0	.816	63.65
Total:					
3 plants	1915	7	75.7	.369	27.72
	1917	15	59.2	.611	37.66
Bottom makers.					
Eastern:					
1 plant	1915	4	72.0	.208	14.98
	1917	6	78.0	.370	28.86
Pittsburgh:					
4 plants	1915	12	62.0	.429	26.64
	1917	14	62.9	.624	39.22
Great Lakes and Middle West:					
4 plants	1915	9	74.6	.276	20.40
	1917	12	72.0	.417	30.02
Southern:					
2 plants	1915	6	72.0	.290	20.86
	1917	6	80.0	.487	38.61
Total:					
11 plants	1915	31	68.9	.329	22.20
	1917	38	70.8	.497	34.59
Bottom makers' helpers.					
Pittsburgh:					
3 plants	1915	14	64.4	.317	20.11
	1917	16	64.0	.453	28.24
Great Lakes and Middle West:					
4 plants	1915	10	74.3	.219	16.18
	1917	16	72.0	.352	25.32
Southern:					
2 plants	1915	6	72.0	.205	14.78
	1917	12	80.0	.336	26.65
Total:					
9 plants	1915	30	69.2	.262	17.74
	1917	44	71.3	.384	26.74

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

BLOOMING MILLS—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Roll engineers.					
Eastern:					
1 plant	1915	2	72.0	$0.250	$18.00
	1917	4	78.0	.373	29.09
Pittsburgh:					
5 plants	1915	13	56.8	.545	29.59
	1917	19	54.2	.797	41.54
Great Lakes and Middle West:					
4 plants	1915	7	75.4	.406	30.35
	1917	11	72.0	.560	40.33
Southern:					
2 plants	1915	3	72.0	.455	32.73
	1917	3	76.0	.761	58.41
Total:					
12 plants	1915	25	65.1	.472	29.26
	1917	37	63.8	.678	41.20
Rollers.					
Eastern:					
1 plant	1915	2	72.0	.385	27.72
	1917	2	78.0	.620	48.36
Pittsburgh:					
5 plants	1915	13	55.9	.749	40.81
	1917	19	53.5	.980	51.38
Great Lakes and Middle West:					
4 plants	1915	7	72.0	.629	45.28
	1917	10	72.0	.780	56.17
Southern:					
2 plants	1915	3	72.0	.707	50.90
	1917	3	76.0	1.117	85.76
Total:					
12 plants	1915	25	63.6	.681	42.22
	1917	34	62.4	.912	55.64
Manipulators.					
Eastern:					
1 plant	1915	2	72.0	.229	16.49
	1917	2	78.0	.412	32.14
Pittsburgh:					
5 plants	1915	13	55.9	.491	26.38
	1917	19	53.5	.752	38.62
Great Lakes and Middle West:					
4 plants	1915	9	72.0	.328	23.66
	1917	10	72.0	.464	33.38
Southern:					
2 plants	1915	3	72.0	.417	30.05
	1917	3	76.0	.659	50.51
Total:					
12 plants	1915	27	64.2	.409	25.15
	1917	34	62.4	.639	37.75
Tablemen.					
Pittsburgh:					
2 plants	1915	5	58.9	.345	20.06
	1917	8	56.0	.479	26.82
Tablemen—Concluded.					
Southern:					
2 plants	1915	4	72.0	$0.223	$16.06
	1917	5	74.4	.310	23.41
Total:					
4 plants	1915	9	64.7	.291	18.28
	1917	13	63.1	.414	25.51
Shearmen.					
Eastern:					
1 plant	1915	2	72.0	.250	18.00
	1917	2	78.0	.410	31.98
Pittsburgh:					
5 plants	1915	15	58.4	.408	23.10
	1917	15	58.1	.592	33.33
Great Lakes and Middle West:					
4 plants	1915	7	72.0	.333	23.97
	1917	10	72.0	.448	32.27
Southern:					
2 plants	1915	3	72.0	.332	23.88
	1917	3	76.0	.503	38.55
Total:					
12 plants	1915	27	64.5	.368	23.03
	1917	30	65.9	.523	33.41
Shearmen's helpers.					
Pittsburgh:					
5 plants	1915	24	60.9	.309	18.54
	1917	16	63.5	.462	29.10
Great Lakes and Middle West:					
3 plants	1915	14	72.9	.239	17.39
	1917	8	72.0	.384	27.67
Southern:					
2 plants	1915	7	72.0	.195	14.04
	1917	5	76.8	.296	22.72
Total:					
10 plants	1915	45	66.4	.272	17.48
	1917	29	68.1	.412	27.60
Laborers.					
Eastern:					
1 plant	1915	4	72.0	.160	11.52
	1917	2	84.0	.250	21.00
Pittsburgh:					
4 plants	1915	79	73.7	.187	13.92
	1917	244	75.3	.300	22.59
Great Lakes and Middle West:					
4 plants	1915	39	72.4	.190	13.75
	1917	88	69.1	.295	20.37
Southern:					
2 plants	1915	15	72.0	.136	9.77
	1917	54	77.4	.217	16.87
Total:					
11 plants	1915	137	73.1	.182	13.34
	1917	388	74.3	.287	21.28

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

PLATE MILLS.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Charging-crane and charging-machine operators.					
Eastern:					
1 plant.....	1915	4	65.3	$0.188	$12.27
	1917	4	66.0	.351	23.13
Pittsburgh:					
3 plants.....	1915	16	72.5	.358	25.96
	1917	16	72.0	.490	35.28
Great Lakes and Middle West:					
3 plants.....	1915	9	70.0	.333	23.10
	1917	10	69.7	.517	35.85
Total:					
7 plants.....	1915	29	70.7	.326	23.18
	1917	30	70.4	.480	33.85
Heaters.					
Eastern:					
1 plant.....	1915	4	65.3	.305	19.92
	1917	4	66.0	.566	37.36
Pittsburgh:					
3 plants.....	1915	16	76.9	.627	48.15
	1917	16	72.0	.851	61.29
Great Lakes and Middle West:					
3 plants.....	1915	7	69.5	.557	38.21
	1917	10	69.7	.726	50.04
Total:					
7 plants.....	1915	27	73.2	.561	41.39
	1917	30	70.4	.771	54.35
Heaters' helpers.					
Eastern:					
1 plant.....	1915	22	65.3	.148	9.65
	1917	12	66.0	.333	21.98
Pittsburgh:					
3 plants.....	1915	18	71.3	.309	22.23
	1917	12	72.0	.556	40.03
Great Lakes and Middle West:					
2 plants.....	1915	10	68.3	.372	25.10
	1917	12	64.3	.517	33.01
Total:					
6 plants.....	1915	50	68.0	.250	17.27
	1917	36	67.4	.469	31.67
Roll engineers.					
Eastern:					
1 plant.....	1915	6	65.3	.188	12.30
	1917	4	66.0	.303	20.00
Pittsburgh:					
3 plants.....	1915	8	71.8	.357	25.46
	1917	8	75.0	.515	38.43
Great Lakes and Middle West:					
3 plants.....	1915	5	72.0	.316	22.77
	1917	8	69.1	.444	30.64
Total:					
7 plants.....	1915	19	69.8	.293	20.60
	1917	20	70.9	.444	31.63
Rollers.					
Eastern:					
1 plant.....	1915	4	65.3	$0.318	$20.77
	1917	4	66.0	.586	38.64
Pittsburgh:					
3 plants.....	1915	8	70.4	.824	57.96
	1917	8	72.0	1.105	79.58
Great Lakes and Middle West:					
3 plants.....	1915	5	68.5	.842	56.85
	1917	6	68.2	1.168	79.09
Total:					
7 plants.....	1915	17	68.6	.710	48.88
	1917	18	69.4	1.011	70.32
Screwmen.					
Eastern:					
1 plant.....	1915	4	65.3	.246	16.02
	1917	4	66.0	.451	29.77
Pittsburgh:					
3 plants.....	1915	8	70.4	.591	41.72
	1917	8	72.0	.795	57.26
Great Lakes and Middle West:					
3 plants.....	1915	6	69.1	.529	36.12
	1917	10	69.7	.728	50.42
Total:					
7 plants.....	1915	18	68.8	.494	34.14
	1917	22	69.9	.702	49.15
Table operators.					
Eastern:					
1 plant.....	1915	4	65.3	.188	12.27
	1917	4	66.0	.351	23.13
Pittsburgh:					
3 plants.....	1915	8	68.8	.375	26.16
	1917	6	72.0	.538	38.74
Great Lakes and Middle West:					
2 plants.....	1915	6	66.2	.374	24.55
	1917	10	67.4	.558	37.55
Total:					
6 plants.....	1915	18	67.1	.333	22.53
	1917	20	68.5	.510	35.02
Hookmen.					
Eastern:					
1 plant.....	1915	8	65.3	.149	9.56
	1917	8	66.0	.283	18.65
Pittsburgh:					
3 plants.....	1915	16	70.4	.361	25.64
	1917	19	72.0	.498	35.87
Great Lakes and Middle West:					
2 plants.....	1915	12	67.6	.332	22.30
	1917	22	68.9	.528	36.30
Total:					
6 plants.....	1915	36	68.3	.304	20.95
	1917	49	69.6	.476	33.25

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Continued.

PLATE MILLS—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Roll hands—other.					
Eastern:					
1 plant	1915	2	65.3	$0.139	$9.07
	1917	4	66.0	.281	18.55
Pittsburgh:					
3 plants	1915	8	70.4	.289	20.46
	1917	10	72.0	.429	30.92
Great Lakes and Middle West:					
1 plant	1915	2	63.3	.340	21.47
	1917	2	60.5	.500	30.25
Total:					
5 plants	1915	12	68.3	.273	18.73
	1917	16	69.1	.401	27.74
Shearmen.					
Eastern:					
1 plant	1915	5	64.2	.232	14.86
	1917	4	66.0	.407	26.83
Pittsburgh:					
3 plants	1915	20	69.5	.557	38.73
	1917	22	72.0	.728	52.42
Great Lakes and Middle West:					
3 plants	1915	17	66.9	.345	23.04
	1917	16	67.5	.571	38.64
Total:					
7 plants	1915	42	67.8	.432	29.54
	1917	42	69.7	.638	44.74
Shearmen's helpers.					
Eastern:					
1 plant	1915	34	64.3	$0.131	$8.42
	1917	24	66.0	.250	16.50
Pittsburgh:					
3 plants	1915	126	70.6	.289	20.52
	1917	116	72.0	.414	29.78
Great Lakes and Middle West:					
3 plants	1915	92	66.9	.250	16.57
	1917	108	66.4	.418	27.72
Total:					
7 plants	1915	252	68.4	.254	17.44
	1917	248	69.0	.400	27.60
Laborers.					
Eastern:					
1 plant	1915	39	59.4	.147	8.70
	1917	11	57.3	.250	14.32
Pittsburgh:					
2 plants	1915	51	71.3	.188	13.37
	1917	126	70.6	.300	21.17
Great Lakes and Middle West:					
2 plants	1915	12	65.4	.187	12.14
	1917	59	72.0	.289	20.79
Total:					
5 plants	1915	102	66.0	.172	11.44
	1917	196	70.3	.294	20.67

SHEET MILLS.

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Pair heaters.					
Pittsburgh:					
4 plants	1915	105	42.7	$0.513	$21.87
	1917	138	44.3	1.103	49.06
Great Lakes and Middle West:					
4 plants	1915	111	43.2	.486	21.00
	1917	138	43.0	.973	41.91
Total:					
8 plants	1915	216	43.0	.499	21.43
	1917	276	43.7	1.038	45.48
Rollers.					
Pittsburgh:					
4 plants	1915	105	42.7	1.191	50.80
	1917	138	44.3	2.651	117.92
Great Lakes and Middle West:					
4 plants	1915	111	43.2	1.265	54.63
	1917	138	43.0	2.530	108.96
Total:					
8 plants	1915	216	43.0	1.229	52.74
	1917	276	43.7	2.591	113.47
Roughers.					
Pittsburgh:					
4 plants	1915	105	42.7	$0.624	$26.64
	1917	138	44.3	1.361	60.53
Great Lakes and Middle West:					
4 plants	1915	111	43.2	.582	25.13
	1917	138	43.0	1.210	52.01
Total:					
8 plants	1915	216	43.0	.602	25.87
	1917	276	43.7	1.285	56.27
Catchers.					
Pittsburgh:					
4 plants	1915	105	42.7	.602	25.67
	1917	138	44.3	1.301	57.82
Great Lakes and Middle West:					
4 plants	1915	111	43.2	.581	25.13
	1917	138	43.0	1.210	52.01
Total:					
8 plants	1915	216	43.0	.591	25.39
	1917	276	43.7	1.256	54.92

FULL-TIME HOURS PER WEEK, RATES OF WAGES PER HOUR, AND FULL-TIME WEEKLY EARNINGS, IN EACH DISTRICT, 1915 AND 1917—Concluded.

SHEET MILLS—Concluded.

[The figures for each group of years are for identical plants.]

Occupation, district, and number of plants.	Year.	Number of employees.	Average full-time hours per week.	Average rate of wages per hour.	Average full-time weekly earnings.
Matchers.					
Pittsburgh:					
4 plants	1915	105	42.7	$0.454	$19.36
	1917	138	44.3	.975	43.36
Great Lakes and Middle West:					
4 plants	1915	111	43.2	.453	19.58
	1917	138	43.0	.916	39.42
Total:					
8 plants	1915	216	43.0	.454	19.47
	1917	276	43.7	.946	41.39
Doublers.					
Pittsburgh:					
4 plants	1915	105	42.7	.447	19.07
	1917	138	44.3	.958	42.40
Great Lakes and Middle West:					
4 plants	1915	111	43.2	.428	18.49
	1917	138	43.0	.855	36.75
Total:					
8 plants	1915	216	43.0	.438	18.77
	1917	276	43.7	.906	39.57
Sheet heaters.					
Pittsburgh:					
4 plants	1915	105	42.7	.880	37.57
	1917	138	44.3	1.970	87.67
Great Lakes and Middle West:					
4 plants	1915	101	43.3	.883	38.21
	1917	138	43.0	1.788	77.05
Total:					
8 plants	1915	206	43.0	.882	37.88
	1917	276	43.7	1.879	82.36
Sheet heaters' helpers.					
Pittsburgh:					
3 plants	1915	66	42.7	.443	18.91
	1917	96	43.9	.872	38.47
Great Lakes and Middle West:					
3 plants	1915	56	43.8	.384	16.74
	1917	120	42.7	.848	36.19
Total:					
6 plants	1915	122	43.2	.416	17.91
	1917	216	43.2	.859	37.21
Shearmen.					
Pittsburgh:					
4 plants	1915	56	42.7	$0.829	$35.37
	1917	83	44.1	1.449	64.32
Great Lakes and Middle West:					
3 plants	1915	34	43.6	.796	34.60
	1917	66	42.6	1.336	56.59
Total:					
7 plants	1915	90	43.0	.816	35.08
	1917	149	43.5	1.399	60.90
Shearmen's helpers.					
Pittsburgh:					
3 plants	1915	44	42.7	.244	10.44
	1917	54	43.8	.546	23.98
Great Lakes and Middle West:					
3 plants	1915	50	43.3	.237	10.33
	1917	66	42.7	.523	22.30
Total:					
6 plants	1915	94	43.0	.241	10.38
	1917	120	43.2	.533	23.06
Openers, male.					
Pittsburgh:					
3 plants	1915	80	42.7	.263	11.25
	1917	91	43.9	.649	27.47
Great Lakes and Middle West:					
3 plants	1915	51	43.3	.274	11.90
	1917	84	42.7	.676	28.85
Total:					
6 plants	1915	131	42.9	.268	11.50
	1917	175	43.3	.662	28.70
Laborers.					
Pittsburgh:					
4 plants	1915	171	66.2	.191	12.59
	1917	199	63.2	.321	20.36
Great Lakes and Middle West:					
4 plants	1915	107	64.9	.180	11.59
	1917	457	61.2	.335	20.50
Total:					
8 plants	1915	278	65.7	.186	12.21
	1917	656	61.8	.331	20.46

REPORT OF PRESIDENT'S MEDIATION COMMISSION.

In the December, 1917, issue of the MONTHLY REVIEW (pp. 53-57) mention was made of the appointment by the President of a commission to visit the mountain region and the Pacific coast for the purpose of learning the causes of discontent in that section and of "lending sympathetic counsel and aid * * * in the development of a better understanding between laborers and employers and also themselves to deal with employers and employees in a conciliatory spirit, seek to compose differences and allay misunderstanding, and in any way that may be open to them to show the active interest of the National Government in furthering arrangements just to both sides." It seems that the immediate anxiety was on account of the dangerous diminution of the copper supply available for ammunition, due partly to the strikes in Arizona, and the hampering of the War program both as to ships and aircraft because of disturbed labor conditions in the Pacific Northwest, so that primarily the objects of the commission were to work the copper mines of Arizona to their maximum output and to keep them open for the period of the War, and to bring to pass such a condition in the labor situation of the Pacific Northwest that the shipbuilding and aircraft programs of the Nation may proceed at the required pace and with efficiency so far as labor is an element. The work of the commission, however, was not confined to these two specific fields, for after it began its labors other difficulties arose which demanded its attention, namely, a threatened strike in the oil fields of southern California, a threatened and partly executed strike on the telephone lines of the Pacific States, and a threatened tie-up of the packing industry centering in Chicago but affecting the industries of the entire country. The article in the December REVIEW dealt particularly with the unsettled labor conditions and the achievements of the commission in bringing about adjustments in the Arizona copper fields. A subsequent article, in the January issue of the MONTHLY REVIEW (pp. 13–17), included the report of the commission condemning the deportation on July 12, 1917, of 1,186 men from Bisbee, in the Warren copper district of Arizona.

In abstract form the report of the commission submitted to the President under date of January 9, 1918, and made public on February 10, contains a statement of the labor disturbances in the copper fields, and a summary of the adjustments effected by the commission,

followed by a comprehensive outline of the efforts put forth by the commission in bringing about a settlement of the California oil fields dispute, the Pacific coast telephone dispute, and the packing industry dispute. The report also includes a brief statement of conditions disclosed to the commission leading to unrest in the lumber industry of the Pacific Northwest. Following these summary statements of the results of specific labor adjustments undertaken by the commission is an analysis, so far as revealed by the limited scope of the investigation, of the difficulties and tendencies making for industrial instability, and the report concludes with recommendations as to the direction that the labor policy of the United States should take, at least during the period of the War, and is signed by W. B. Wilson, Secretary of Labor, chairman; Ernest P. Marsh; Verner Z. Reed; Jackson L. Spangler; and John H. Walker.

DISPUTES IN ARIZONA COPPER DISTRICTS.

Fundamental causes of the labor disturbances in 1917 in the Arizona copper fields, where about 28 per cent of the total copper output of the United States is produced, were found by the commission to be (1) "the underlying labor conditions of the mining industry of the State, which were devoid of safeguards against strikes and in fact provocative of them," and (2) distant ownership of mines and the failure on the part of the resident managers "to understand and reach the mind and heart of labor because they have not the aptitude or the training or the time for wise dealing with the problems of industrial relationship. The managers are technical men, mining engineers of knowledge and skill. There is no responsible executive whose sole function it is to deal with labor problems."

The facts that the working force is migratory, constituting "economically an intolerable waste," that many nationalities (26 in one camp and 32 in another) are represented in each camp, and that "the movement toward Americanization, so fruitful in its results in different parts of the country, has hardly penetrated into these outposts of industry," have apparently contributed to the unsettled conditions which the commission found in the copper fields. Conditions varied somewhat in the four districts covered, but amidst all the diversities there were three basic claims, urged by the men and resisted by the companies, which are given in the report as follows:

(*a*) While not expressed in so many words, the dominant feeling of protest was that the industry was conducted upon an autocratic basis. The workers did not have representation in determining those conditions of their employment which vitally affected their lives as well as the company's output. Many complaints were, in fact, found by the commission to be unfounded, but there was no safeguard against injustice except the say so of one side to the controversy. In none of the mines was there direct dealing between companies and unions. In some mines grievance committees had been recently established, but they were distrusted by the workers as subject to

company control, and, in any event, were not effective, because the final determination of every issue was left with the company. In place of orderly processes of adjustment, workers were given the alternative of submission or strike.

(*b*) The men sought the power to secure industrial justice in matters of vital concern to them. The power they sought would in no way impinge on the correlative power which must reside in management. Only by a proper balance of adequate power on each side can just equilibrium in industry be attained. In the minds of the workers only the right to organize secured them an equality of bargaining power and protection against abuses. There was no demand for a closed shop. There was a demand for security against discrimination directed at union membership. The companies denied discrimination, but refused to put the denial to the reasonable test of disinterested adjustment.

(*c*) The men demanded the removal of certain existing grievances as to wages, hours, and working conditions, but the specific grievances were, on the whole, of relatively minor importance. The crux of the conflict was the insistence of the men that the right and the power to obtain just treatment were in themselves basic conditions of employment, and that they should not be compelled to depend for such just treatment on the benevolence or uncontrolled will of the employers.

The correction of these underlying conditions making for instability was the aim of the commission in its adjustments. Although four specific adjustments were made, the general principles incorporated in the agreements were as follows:

(*a*) An orderly and impartial process for the adjustment of all grievances inevitable in modern large-scale industry was substituted for the strike. In asking labor, for the period of the War, to forego its ultimate weapon, a compensatory means of redressing grievances had to be supplied. Therefore, there are established in each district United States administrators to decide all disputes where the parties themselves fail of agreement. The commission in effect applied the principle of trade agreements, making the duration of the War the time limit, and, through the mechanism of a United States administrator, provided for the means of determining any claims of breach of the agreement.

(*b*) Working conditions of industry should normally be determined by the parties themselves. Therefore channels of communication between the management and men were created through grievance committees free from all possible company influence. Through these representative contacts between management and men disputes find expeditious and informal settlement. Still more important, the contact engenders a spirit of mutual understanding and therefore of cooperation.

(*c*) The right of the men to organize was made effective by providing administrative enforcement for the prohibition against discrimination because of union affiliation.

(*d*) In view of the dislocation of the labor supply of the country it was important to husband the available man power. Therefore reemployment of the men on strike before employing newcomers was assured, excepting only those—few in number—who were guilty of seditious utterances, who had been proved inefficient, or who were members of any organization whose principles were opposed to belief in the obligation of contract. By casting the burden of reemployment of all the strikers upon the district instead of upon the individual company, the beginning was made toward recognizing the responsibility of the industry as an entirety for the solution of its problems.

The report says that administration under this settlement has proceeded in these Arizona districts for over two months and the results are encouraging.

CALIFORNIA OIL FIELDS DISPUTE.

In the oil fields of southern California, where the output is 8,000,000 barrels per month and the number of employees is approximately 18,000, a threatened strike in the fields of independent companies in the summer of 1917 and again in the following November, directed the attention of the commission to an adjustment of differences which concerned wages, hours, conditions of employment, and alleged discrimination against the men because of membership in the union which had been organized in April, 1917, and had grown to include between 9,000 and 10,000 men. The commission found that the major specific demands of the men, a very large proportion of whom are highly skilled, were for an 8-hour day and a minimum wage of $4, it appearing that 5,000 employees of a certain company had been on an 8-hour basis since January 1, 1917. The commission succeeded in obtaining an 8-hour day for the employees of the independents, effective January 1, 1918, conditioned on the right of the Government to demand a longer working day should emergency require it, and in establishing the principle of the minimum wage of $4 on an 8-hour basis, effective December 1, 1917. The companies further agreed not to discriminate against men because of membership in any union affiliated with the American Federation of Labor. In the oil fields, as in the copper districts, machinery for adjustment of disputes was essential, and provision was therefore made for Government inspectors to determine the Government's need, if any, for increase in the working hours. Administrators were named for all disputes which the parties themselves can not settle. The report says in conclusion:

> The men thus secured betterment in hours and conditions of employment and the means of redress for future grievances. In effect the settlement operated as a trade agreement for the period of the War and thereby displaced the strike and the lockout. The Government is thus assured stability as to labor conditions in the oil production of California. Opportunities are afforded the men to become disciplined through responsible organization, with resulting increase in efficiency; and the contact between producers and men will make for the healthier relationships between them indispensable to peace and productivity in industry. The response to the Government's needs, once they were made clear to both operators and men, gives full hope for the growth of a cooperative spirit between them. The men showed every readiness to produce the much-needed oil; the operators, both independent and Standard Oil, placed all their resources without stint at the disposal of the Government.

PACIFIC COAST TELEPHONE DISPUTE.

The Pacific coast telephone dispute threatened to tie up the service in California, Oregon, Washington, Idaho, and Nevada, and in November, 1917, a strike actually became effective in Washington and Oregon. About 3,200 men who construct and keep up the plant and about 9,000 girl operators were involved in the dispute, which seemed to center about a demand on the part of the International

Brotherhood of Electrical Workers for recognition of the girls' union which had affiliated with them. "The men for the first time—being most favorably situated because of the demand for skilled electricians—made the recognition of the girls' union their controlling principle." The report states, however, that there were two other issues: A demand for an increase of wages and a demand for a closed shop, subsequently modified into a desire for a preferential shop. The men demanded a 25 per cent wage increase; the company offered a 12½ per cent increase. The closed-shop demand was used as a leverage in bargaining, but the preferential-shop idea was vigorously urged. These specific issues, it seems, were enveloped in an atmosphere of misunderstanding and suspicion, not only between the company and its employees but also between the northern and southern groups of employees. Moreover, a false issue of loyalty had been raised, particularly against the striking girls, which was vigorously repelled. Here, as the commission found was the case elsewhere, the attempt of parties on one side of an economic controversy to appropriate patriotism and stigmatize the other side with disloyalty served only to intensify the bitterness of the struggle and to weaken the force of unity in the country. What the commission was able to achieve in adjusting this dispute is set forth in the following excerpt from the report:

(*a*) The girls' locals were included in the trade agreement between the company and the brotherhood. In some other parts of the country the company had heretofore recognized the girls' union, and the plea that this made for inefficiency was the speculation of fear rather than the judgment of experience.

(*b*) Wage increases, obviously necessary, were provided for, leaving the extent of further increases to negotiation between the parties. In default of agreement, the issue was to be determined by an arbiter, to pass upon the complicated facts of a proper wage scale.

(*c*) The recognition of the girls' union, as well as the enforcement of all future grievances, was made effective by the establishment of impartial administrative machinery. United States administrators in the various districts were provided for the settlement of all issues which the parties themselves could not adjust.

(*d*) For the period of the War at least, in place of the resort to strike or lockout, there was thus established an effective peaceful process for the redress of grievances, secured by the authority of the United States Government.

(*e*) In effect there were involved a reversal of the labor policy of the company. New currents of cooperation were created. It takes some time, however, for such a change of policy to permeate through all the stages of an industrial hierarchy. Partly therefore, through this delayed adjustment to a new industrial régime on the part of local subordinate officials, partly by reason of obstructive suspicion of some of the radical labor leaders in the northern States, partly because of the limited facilities for labor administration on the part of the Government, considerable difficulty was experienced in the early days following the ratification of the commission's settlement. The commission was constantly appealed to. The quick exercise of administrative action by the commission and the new administrators, and a strict eye to the enforcement of the settlement in cooperation with the more conservative union leaders

and the higher officials of the company, succeeded in tiding over—by a process of flexible administration rather than adjudication—the obstructions and difficulties inevitable in such a situation. Before the commission left the coast signs of a new order of good relationship were already evident. Since then the representatives of the company and the brotherhoods have successfully negotiated a new wage scale without resort to arbitration.

UNREST IN THE LUMBER INDUSTRY OF THE PACIFIC NORTHWEST.

The lumber industry of the Pacific Northwest, employing about 70,000 men, suffered a breakdown of several months in the summer of 1917, "and is still in a state of seething unrest, woefully short of its productivity; for while the strike of 1917 was broken and the men went back beaten for the moment, the conflict was only postponed and not composed." The situation may be summed up in the following words of the report:

> We are dealing with an industry still determined by pioneer conditions of life. Hardy contact with nature makes certain rigors of conditions inevitable, but the rigors of nature have been reinforced by the neglects of men. Social conditions have been allowed to grow up full of danger to the country. It is in these unhealthy social conditions that we find the explanations for the unrest long gathering force but now sharply brought to our attention by its disastrous effect upon war industries. The unlivable condition of many of the camps has long demanded attention. While large improvements in camp life have recently been made, many of the camps still require much betterment to make them fit human habitations. A number of employers have shown a most commendable understanding of the implications of operating camps unfit for men. Unfortunately, however, the old abuses were so long continued and so widespread, that even after physical conditions are bettered a sense of grievance remains. This discontent gradually translated itself into demands not merely for physical comforts but for certain spiritual satisfactions.
>
> Partly the rough pioneer character of the industry, but largely the failure to create a healthy social environment, has resulted in the migratory, drifting character of workers. Ninety per cent of those in the camps are described by one of the wisest students of the problem, not too inaccurately, as "womanless, voteless, and jobless." The fact is that about 90 per cent of them are unmarried. Their work is most intermittent, the annual labor turnover reaching the extraordinary figure of over 600 per cent. There has been a failure to make of these camps communities. It is not to be wondered, then, that in too many of these workers the instinct of workmanship is impaired. They are—or, rather, have been made—disintegrating forces in society.

It was found that efforts had been made to rectify evils through the trade-union movement, but these seem to have failed because of the small headway trade-unions are able to make, due largely "to the bitter attitude of the operators toward any organization among their employees," an attitude which "has reaped for them an organization of destructive rather than constructive radicalism." The focusing point of the unrest was a demand for the 8-hour day, the lumbering industry being almost the only large industry on the coast in which the basic 8-hour day does not prevail. "Opposition to the 8-hour day is carried to the point of binding members of an employers' association on the Pacific coast by agreement to discriminate against

such mills as introduce the change." The efforts of the commission to establish an 8-hour day in the lumber industry were not entirely successful.

In the judgment of the commission the introduction of the basic 8-hour day in the Pacific Northwest lumber industry is indispensable as a measure of national need. It is essential in order to assure stability in the industry, efficiency of output, and to obtain an adequate labor supply in the face of better competitive conditions in neighboring industries. Negotiations between the commission and the operators' association on the coast had reached a point where the adoption of the 8-hour day seemed practically assured. Unfortunately, conferences between representatives of the Pacific coast lumbermen and officials in Washington, held contemporaneously with the session of the commission in Seattle, gave rise to advices from such representatives to their associates on the coast which led to a reversal of attitude and to insistence that the 8-hour day must go into operation for the entire country before the Northwest Pacific coast would yield. The principal and certain source of difficulty, therefore, remains. It can be and should be promptly removed by administrative action requiring the basic 8-hour day in all contracts for lumber entering into Government work.

Some means of contact between operators and employees as a body is likewise essential. If it is too abrupt a step in the evolutionary process of this industry to deal collectively with trade-unions, some method of representation of the workers collectively in determining the general conditions under which they work and for securing rectification of evils should be devised.

PACKING INDUSTRY DISPUTE.

Of very great importance in the prosecution of the War is the meat-packing industry centering in Chicago. Because of this fact the threatened strike in December, 1917, affecting upward of 100,000 men, directed the attention of the commission to an adjustment of the differences involved. In that industry, according to the report of the commission, the packers have long opposed the organization of their workingmen, and the union, which had been destroyed by the strike of 1903, had not been able, up to 1917, to rehabilitate itself. In 1917, however, effective organization again made itself felt, and by the end of the year from 25 to 50 per cent of the men were unionized. An effort was made to induce the packers to recognize the union, at least to the extent of meeting its representatives and talking matters over. This the packers refused to do. The specific grievances in the controversy, which threatened to result in a strike, were low wages and long hours. The men asked for an 8-hour day in place of a 10-hour day. The companies conceded the principle of the 8-hour day, but claimed to be obstructed in its adoption by reason of difficulties attending both inbound and outbound shipments, conditions which "depend for correction upon action both by the Government and the industry." The commission's settlement proceeded along the general lines it had taken in other industries:

(*a*) The principle of adjustment through negotiation and arbitration was established to take the place of strike and lockout during the period of the War.

(*b*) Prohibition of discrimination for union affiliation is rendered effective by its enforcement through administrative machinery. It is not sufficient to recognize in the abstract the right of workmen to organize. Therefore, effective means were provided to secure to the union the right to live and to grow.

(*c*) The unfairness of compelling workmen to deal individually with employers of large-scale industries, particularly emphasized in the case of non-English speaking workmen, is recognized in practice by allowing workmen to voice their claims through representatives.

(*d*) The specific demands of the workers as to changes in hours, wages, and conditions of employment were all left for determination by the United States administrator.

Here, as elsewhere, a tense situation threatening breakdown of a vital war industry was relieved by establishing machinery for adjustment. Under this machinery the parties are now proceeding to work out their difficulties. The hope is entertained that not only will specific grievances be justly dealt with but healthier permanent relationships will be created in the very process of seeking to reach adjustments.

CAUSES OF LABOR DIFFICULTIES.

While each industry presents its own peculiarities, certain underlying general factors applicable to all industries were found by the commission, during the three months' investigation, to be the cause of labor difficulties. The effective conduct of the War, declares the commission, suffers needlessly because of (1) interruption of work due to actual or threatened strikes, (2) purposed decrease in efficiency through the "strike on the job," (3) decrease in efficiency due to labor unrest, and (4) dislocation of the labor supply. Among the causes of unrest the following are given as being especially significant of the industrial needs of the War:

(*a*) Broadly speaking, American industry lacks a healthy basis of relationship between management and men. At bottom this is due to the insistence by employers upon individual dealings with their men. Direct dealings with employees' organizations is still the minority rule in the United States. In the majority of instances there is no joint dealing, and in too many instances employers are in active opposition to labor organizations. This failure to equalize the parties in adjustments of inevitable industrial contests is the central cause of our difficulties. There is a commendable spirit throughout the country to correct specific evils. The leaders in industry must go further, they must help to correct the state of mind on the part of labor; they must aim for the release of normal feelings by enabling labor to take its place as a cooperator in the industrial enterprise. In a word, a conscious attempt must be made to generate a new spirit in industry.

(*b*) Too many labor disturbances are due to the absence of disinterested processes to which resort may be had for peaceful settlement. Force becomes too ready an outlet. We need continuous administrative machinery by which grievances inevitable in industry may be easily and quickly disposed of and not allowed to reach the pressure of explosion.

(*c*) There is a widespread lack of knowledge on the part of capital as to labor's feelings and needs and on the part of labor as to problems of management. This is due primarily to a lack of collective negotiation as the normal process of industry. In addition there is but little realization on the part of industry that the so-called "labor problem" demands not only occasional attention but continuous and systematic responsibility, as much so as the technical or financial aspects of industry.

(*d*) Certain specific grievances, when long uncorrected, not only mean definite hardships; they serve as symbols of the attitude of employers and thus affect the underlying spirit. Hours and wages are, of course, mostly in issue. On the whole, wage increases are asked for mostly in order to meet the increased cost of living, and such demands should be met in the light of their economic causes. Again, the demand for the 8-hour day is nation-wide, for the workers regard it as expressive of an accepted national policy.

RECOMMENDATIONS.

In conclusion, the President's mediation commission submits the following recommendations:

1. The elimination to the utmost practical extent of all profiteering during the period of the war is a prerequisite to the best morale in industry.

2. Modern large-scale industry has effectually destroyed the personal relation between employer and employee the knowledge and cooperation that come from personal contact. It is therefore no longer possible to conduct industry by dealing with employees as individuals. Some form of collective relationship between management and men is indispensable. The recognition of this principle by the Government should form an accepted part of the labor policy of the Nation.

3. Law, in business as elsewhere, depends for its vitality upon steady enforcement. Instead of waiting for adjustment after grievances come to the surface there is needed the establishment of continuous administrative machinery for the orderly disposition of industrial issues and the avoidance of an atmosphere of contention and the waste of disturbances.

4. The 8-hour day is an established policy of the country; experience has proved justification of the principle also in war times. Provision must of course be made for longer hours in case of emergencies. Labor will readily meet this requirement if its misuse is guarded against by appropriate overtime payments.

5. Unified direction of the labor administration of the United States for the period of the War should be established. At present there is an unrelated number of separate committees, boards, agencies, and departments having fragmentary and conflicting jurisdiction over the labor problems raised by the War. A single-headed administration is needed, with full power to determine and establish the necessary administrative structure.[1]

6. When assured of sound labor conditions and effective means for the just redress of grievances that may arise, labor in its turn should surrender all practices which tend to restrict maximum efficiency.

7. Uncorrected evils are the greatest provocative to extremist propaganda, and their correction in itself would be the best counterpropaganda. But there is need for more affirmative education. There has been too little publicity of an educative sort in regard to labor's relation to the War. The purposes of the Government and the methods by which it is pursuing them should be brought home to the fuller understanding of labor. Labor has most at stake in this War, and it will eagerly devote its all if only it be treated with confidence and understanding, subject neither to indulgence nor neglect, but dealt with as a part of the citizenship of the State.

[1] Since this report was written, the direction of the labor administration for the War has been delegated to the Secretary of Labor.

TRADE AGREEMENTS IN THE WOMEN'S CLOTHING INDUSTRIES OF CINCINNATI AND ST. LOUIS.[1]

BY BORIS EMMET, PH. D.

Prior to 1916 the extent of collective bargaining in the women's wear industries of Cincinnati and St. Louis was negligible. The achievements of the Cincinnati garment workers' unions in the form of effective trade agreements were insignificant. A similar situation prevailed in the women's clothing industries of St. Louis, where, in spite of the activity of labor organizations, no successful collective bargaining was taking place.

The causes responsible for the failure of the Cincinnati and St. Louis garment workers' organizations to achieve their objects need not be commented upon at great length. In both of these cities only a very small part of the workers in the trade were organized. Unrestricted immigration flooded the local labor markets, as it did the garment trades of New York, Philadelphia, and Chicago, and caused a severe competition for positions. This competition for jobs made effective organization impossible. The correctness of this statement is confirmed by the present management of the garment workers' unions of both cities and by many employers, all of the informants pointing emphatically to unrestricted immigration "as the principal cause for the prolonged lack of effective organization on the part of the workers."

The great diminution in the amount of immigration which came as a result of the European War appears to have had a salutary effect upon the existing labor organization. The decrease in the vast and steady inflow of potential competitors for positions contributed greatly to the stabilization of the garment workers' unions. A curtailed supply of labor increased the bargaining power of workers already in the trade, but particularly of those, who, through unionization, could take immediate advantage of the new situation. So great, however, was the prewar labor supply in the garment trades of these cities that it took more than a year to exhaust it. Not until the busy season of the fall of 1915 were the effects of a diminished labor supply felt.

The shortage of labor due to the sudden curtailment of immigration was further intensified with the entry of the United States into

[1] This article is a preliminary summary of one of the phases of a study of trade agreements to be published by the bureau. Similar articles dealing with trade agreements in the women's wear industries of New York City, Philadelphia, and Chicago appeared, respectively, in the December, 1917, and January and February, 1918, issues of the MONTHLY REVIEW.

the war, which immediately resulted in a demand for vast amounts of war clothing, and in additional need, therefore, for the services of needle-trade hands in the men's clothing industries which received the war contracts. The intensified demand for such workers in the men's clothing trades drew many of the women's garment workers from their old positions to the more remunerative and steady employment offered by the war-clothing establishments.

A diminished supply of labor, coupled with a greatly intensified demand for it, was, no doubt, responsible for the establishment of effective collective bargaining on a large scale in the women's ready-to-wear clothing industries of Cincinnati, as well as for the appearance, for the first time, of a relatively strong garment workers' union in the city of St. Louis. As will be shown, the influence of this organization is just beginning to make itself felt.

CINCINNATI.

The total number of workers employed at the present time in all of the garment industries of Cincinnati is estimated to be close to 1,600. Of this number about 1,200 are engaged in the manufacture of cloaks, suits, and skirts, the remaining 400 being employed in a dozen establishments which specialize in the making of house dresses, kimonos, and white goods or women's underwear. As regards unionization, various conditions exist in the different industries mentioned. No unionism to speak of exists in the house-dress, kimono, or white-goods industries. A different situation, however, is to be found in the cloak and suit industry, the principal women's wear industry of the city. More than two-thirds of the cloak and suit makers of Cincinnati are members of unions and work at the present time under union conditions, as described elsewhere in this article.

The cloak makers of Cincinnati are organized as locals 30, 63, and 98 of the International Ladies' Garment Workers' Union. These three locals are connected by means of a joint committee known as the Joint Board of Cloak and Skirt Makers' Unions of Cincinnati, which is made up of delegations from each of the local unions. It is in the name of this board and with its sanction that all trade agreements with employers are entered into.

On February 7, 1916, a general strike was declared in the cloak and suit industry of Cincinnati for the purpose of forcing union recognition and collective bargaining.

The strike proved effective and achieved its purposes. As a result of it, 15 agreements were signed with as many firms. Each of the agreements is to run for one year from the date of signing and provides for the following: (1) The employer agrees to hire none but members of the union to perform all the cutting, sewing, pressing, finishing,

and busheling; (2) there is to be at all times in the shop of the employer a shop chairman, selected by the employees to represent them in their dealings with the employer; (3) duly authorized union officials are to be allowed to visit the factory for the purpose of investigating existing conditions regarding safety, sanitation, and ventilation as well as to ascertain if the provisions of the agreement are complied with; (4) all cutters, trimmers, sample and duplicate makers, bushelmen, and skirt underpressers are to work by the week and at the following minimum weekly rates of wages: Full-fledged cutters, $26; trimmers, $20; sample and duplicate operators, $26; sample and duplicate finishers, $16; bushelmen, $22; skirt underpressers, $18; (5) an increase of $2 per week above the scale of February 7, 1916, to all week workers other than those specified in the preceding provision; (6) employees engaged in branches of the trade not enumerated above are to be paid by the piece; (7) piece rates are to be determined on a basis which will yield to a jacket operator 75 cents per hour, to a skirt operator 60 cents, to an upper presser 60 cents, and to a finisher 50 cents per hour; (8) all piece rates are to be determined collectively by the employer and a piece-price committee freely selected by the employees, and employees are not to be required to work on garments before a mutually satisfactory price has been established; (9) if, upon investigation, it should be established that piece prices have been settled below the hourly base rates specified above, such prices are to be resettled; (10) a week's work is to consist of 48 hours, distributed over six working days; (11) overtime work is to be limited to six hours per week, and permissible only during the busy seasons of the year; (12) time and a half for overtime work to week workers; (13) four legal holidays, with pay, to week workers; (14) equal distribution of work among all workers; (15) no employee to be discharged without good cause after an initial trial period of two weeks, with the further proviso that workers wrongfully discharged or laid off are to be entitled to full pay for the time lost; (16) any dispute between the firm and its employees which can not be adjusted by the shop chairman or union representative is to be submitted to arbitration.

As mentioned, the organized two-thirds of the cloak and suit makers of Cincinnati work under the conditions just enumerated. The unorganized workers of the trade are employed in four establishments, which, although having no understanding with the union, and still clinging, nominally at least, to individual bargaining methods, maintain very similar conditions of hours and wages. It is the opinion of the employers who deal collectively with their employees that the rates of pay and general conditions of work in the Cincinnati cloak and suit trade have been thoroughly equalized and that the few non-

union shops actually maintain union standards. The existence of such a situation is attributable to the fact that the relative scarcity of workers which some time ago began to be felt during the busy seasons, has made the existing trade-unions powerful. Employers incurring the active enmity of the garment workers' organization find themselves unable to secure the needed help during the busy seasons of the year. Instances are actually known of employers who had to give up their business on account of lack of help, due chiefly to their unwillingness to maintain union standards.

The agreements in operation at the present time in the cloak and suit industry are working satisfactorily. Grievances which arise are peacefully and quickly adjusted by the parties themselves without recourse to the assistance of outside arbitrators or umpires provided for by the agreement in cases upon the disposition of which the parties themselves can reach no satisfactory settlement.

In addition to the 19 cloak and suit houses referred to there are to be found in the city of Cincinnati about a dozen firms which specialize in the manufacture of house dresses, kimonos, and women's underwear. These establishments employ about 400 workers—mostly unskilled immigrant girls, with little or no aptitude for organization. It is said on reliable authority that the labor conditions prevailing at the present time in the house-dress, kimono, and white-goods establishments are oppressive and rates of wages low. An effort was made some time ago to organize these trades, but with little success. One firm, employing about 40 hands, agreed to introduce and maintain union conditions of work and pay, but refused to recognize the union. This firm granted to its employees the following concessions: (1) A 48-hour week; (2) time and one-half for overtime work; (3) a 15 per cent increase in wage rates; (4) a minimum weekly wage of $7 for beginners; (5) a promise that in the future all piece rates would be made in consultation with a price committee selected by the employees.

The specified conditions are interesting because of the fact that the joint board of cloak makers' unions, which is temporarily in charge of the situation, intends to make similar demands upon the other employers of the trade, and has a good chance to win the desired concessions. A definite demand for union recognition will, it is said, supplement the other demands to be made.

ST. LOUIS.

Within the boundaries of the city of St. Louis are located about 35 establishments engaged in the manufacture of women's ready-to-wear clothing. The manufacturing activity of these establishments is confined principally to the making of cloaks, suits, skirts, and, in a

very few instances, dresses. Very few waists, house dresses, and kimonos and almost no white goods are made in St. Louis.

The total number of women's garment workers in the city is estimated to be slightly over 1,500, one-eighth of which, or about 200, are organized as Local 15 (skirt, waist, and dress makers' union) of the International Ladies' Garment Workers' Union. This union has at the present time seven trade agreements with as many firms. The number of workers covered by these agreements is about 150. The number of workers affiliated with the union is, however, somewhat larger, as a considerable number of union garment makers are employed by firms which have no trade agreements with their employees.

The existing trade agreements are uniform in their provisions, each specifying the following conditions: (1) Employment of none but union members as long as the union is willing and ready to furnish all the needed help; (2) the presence in each establishment of a shop chairman and piece-rate committee;[1] (3) limitation of extent of overtime, such overtime to be confined to three evenings per week—Tuesday, Wednesday, and Thursday—between 5.30 and 8 o'clock, and only during the busy seasons of the year; (4) payment to week workers for certain legal holidays; (5) equal distribution of work among the workers; (6) peaceful adjustment of all grievances by the parties themselves, and in cases upon the disposition of which no satisfactory agreement can be reached, by a mutually agreeable third and outside person, or umpire, whose decision in the matter is to be final and binding upon both sides.

The number of women's garment making establishments in St. Louis which deal collectively with their employees is not sufficiently large to exercise any definite influence in determining the conditions of labor for the industry at large, the major part of which, as already stated, is still on an individual bargaining basis. This form of bargaining does not appear to work in the interests of the workers. It is stated on reliable authority that the conditions of labor, and particularly of pay, in existence at the present time in the major part of the industry, are considerably below those specified in the agreements described above. The remedy for this condition lies, apparently, in the establishment of some form of collective bargaining.

General industrial conditions in the garment trades of St. Louis at the present time seem to be very favorable for establishing effective collective bargaining. The local supply of women's garment makers

[1] The shop chairman is the official representative of the union on the premises of the firm, in charge of guarding the interests of the employees. He is in constant touch with his fellow workers, gives advice when needed, hears employees' complaints, and confers with the firm for the purpose of adjusting grievances. The piece-rate committee is in charge of rate making, being called into consultation by the employer whenever piece rates are to be set, it being understood that no rate is to become effective unless approved by the committee.

has been greatly diminished by the cessation of European immigration and by the entry of the United States into the war, which drew many women's garment workers to war clothing factories where wages were better and employment steadier. This movement of women's garment makers has greatly strengthened the strategic position of the organized minority of the workers in the trade. The union is at the present time contemplating the launching of a campaign for a complete unionization of the industry. Uniform demands are to be made upon all of the women's garment manufacturers of the city. Although not as yet finally formulated, these demands will embrace the following: (1) Union recognition and collective bargaining; (2) minimum weekly rates of wages as follows: For cloak cutters, $28.50; for skirt cutters, $25; for trimming cutters, $20; (3) equal distribution of work among the workers; (4) 48-hour week; (5) limitation of overtime, such overtime to be permitted only during the very busy seasons of the year; (6) time and one-half for overtime work; (7) pay to week workers for certain legal holidays; (8) peaceful adjustment of all grievances, with the further provision that cases upon the disposition of which the parties themselves are unable to agree are to be submitted for adjustment to a mutually satisfactory outside party, or umpire, whose decision is to be considered as binding upon both sides; (9) in exchange for a promise of the employer not to lock out his help, the union is to refrain from calling strikes pending the peaceful adjustment of grievances by the agencies created for that purpose.

LABOR AND THE WAR.

ADJUSTMENT OF SHIPBUILDING DISPUTES ON THE PACIFIC COAST.

On August 20, 1917, an agreement was entered into by Government officials and labor chiefs, the object of which was that disputes concerning wages, hours, or conditions of labor in the construction of shipbuilding plants or of ships might be speedily and satisfactorily adjusted without interruption of production necessary to the national defense.

This agreement, which was reproduced in the October, 1917, number of the MONTHLY REVIEW (p. 27), provided for an adjustment board of three persons "to be appointed by the United States Shipping Board Emergency Fleet Corporation, one to represent the said corporation, one to represent the public and to be nominated by the President of the United States, and one to represent labor, the last to be nominated by Samuel Gompers." As constituted, the board consisted of V. Everit Macy, of New York, chairman; A. J. Berres, of Washington, secretary-treasurer of the metal trades department of the American Federation of Labor; and E. F. Carry, of Chicago, president of the Haskell-Barker Car Co., representing, respectively, the public, labor, and the Emergency Fleet Corporation. After serving for a time Mr. Carry, representing the Emergency Fleet Corporation, resigned and was succeeded by Mr. Louis A. Coolidge.

On November 4, 1917, the adjustment board announced its decision as to disputes in shipyards of San Francisco Bay, Columbia River, and Puget Sound districts. This decision, which took effect November 12, 1917, is as follows:

DECISION OF SHIPBUILDING LABOR ADJUSTMENT BOARD TOUCHING DISPUTES IN SHIPYARDS OF SAN FRANCISCO BAY AND COLUMBIA RIVER AND PUGET SOUND DISTRICTS.

I. *Origin and purpose of board.*—The Shipbuilding Labor Adjustment Board is a war board. Its supreme object is to hasten the carrying out of the shipbuilding program of the Government. Employers and employees in the shipbuilding industry are enlisted in their country's service just as truly as the soldiers at the front. With all possible earnestness we wish to impress upon them their obligation to merge their individual interests in the common purpose of supplying the ships which the country requires. With their help we shall win the war. Without their loyal cooperation our democratic institutions will go down to merited defeat.

II. *Obligation of employers and employees to cooperate.*—The owners of the shipyards are, during the duration of the war, merely the agents of the Government. Practically the whole shipbuilding industry of the country is being carried on for the benefit of the Government. Employers and employees in the shipyards must realize that the war has changed their relation to each other. They are now working together for the preservation of their common country.

The Government is insistent that the ships it requires must be built and built promptly. It is equally insistent that standards of living must be preserved. Employees may thus join with hearty accord in the efforts of employers to carry out the shipbuilding program and rely on the good faith of the Government and of this board to see to it that any grievance that they may have is promptly considered and fairly adjusted.

III. *Rapid expansion of shipbuilding industry called for.*—The national program requires an increase in the output of ships from the 750,000 tons turned out in 1916 to 6,000,000 tons in 1918. This necessitates the introduction, wherever possible, of the two and even three shift systems. Immediate steps to bring about this change must be taken by shipyard owners. It will involve not only the enlargement of the labor force, but provision of adequate lighting facilities and safety devices to protect employees from the special hazards connected with nightwork.

At a rough estimate the shipyards of the Pacific coast already employ 50,000 men. To meet the pressing needs of the Government at least 75,000 more men must be employed. This will mean a demand for at least 30,000 skilled mechanics in addition to those already employed, a demand that can only be satisfied by drawing mechanics to the shipyards from less essential industries and by training men who have not yet the required skill.

Realization of these conditions is causing the Government to concern itself seriously with the problem of redistributing and increasing the available supply of skilled workers. In San Francisco and Seattle and to a less extent in Portland, employers look to the trade-unions to supply additional workers in the different crafts as they are required. The evidence presented to us indicates that some of the unions are already unable to meet demands on them. In view of the certainty of a greatly increased demand, the board urges upon the Department of Labor the extension of the Federal Employment Service in California, Oregon, and Washington to serve as a supplement to the trade-unions when they are unable themselves to supply skilled craftsmen. The board also urges that representatives of organized labor and the employers concerned work out, in cooperation with agents of the Government, plans for the more rapid training of skilled workers in the different crafts.

IV. *Discrimination against unfair material.*—Whatever reasons may be urged in defense of discrimination against so-called "unfair" material in time of peace, to permit such discrimination to interfere with the defense of the Nation in time of war would be intolerable. We trust to the good sense and patriotism of the employees to refrain from such practices when opposed to the interests of the Government.

V. *Factors considered in determining wages.*—In arriving at a fair wage scale we have had two ends in view—equalizing wage rates in the three shipbuilding centers and adjusting wages to the higher cost of living resulting from the war.

The enticing of workers from one plant to another and from one city to another has had a demoralizing effect on the production of ships. The establishment of a uniform wage scale for the San Francisco, Columbia River, and Puget Sound districts will have a steadying influence. Therefore, since the cost of living in these districts is substantially the same, we have decided upon a uniform scale for all of them.

In order to preserve the standards of living in existence before the war we took as a basis the rates on which employers and employees had united as shown by the agreements in effect June 1, 1916. To determine the increase in the cost of living from that time until October 1, we made use not only of the evidence presented at our hearings in the three cities but also of all other available material and investigations, including Federal, State, and municipal reports. The wages fixed represent the wages current in the three cities, increased to conform to the ascertained increase in the cost of living.

We believe that public opinion approves the intention of the Government to protect, so far as may be possible, American standards of living. On the other hand

we do not believe that advantage should be taken of the national emergency to increase wages beyond a point corresponding to the increased cost of living. Attracting workers to the shipbuilding industries of the Pacific coast by establishing higher wages than are justified by the expense of living would, we believe, instead of improving the national labor situation, cause even greater disorganization than already exists. As a national board we feel bound to view our task nationally and arrive at decisions that will tend to increase the production of ships and other essential commodities, not merely in one locality but in the whole country.

Cooperation of employers and employees will be counted upon to adjust in proportion to the scale hereby fixed all differences, if any, which now exist or which may hereafter arise with respect to wages of employees not specifically named in the attached schedule. In any event it must be borne in mind that any such differences not covered by this report and decision are subject to prompt adjustment through the medium of the examiner of each district.

VI. *Decision of board as to issues in dispute.*—Our decision in regard to the issues presented to us is as follows:

First. The minimum rates of wages to be paid the different classes of employees in the shipyards covered by this decision shall be as set forth in the schedule appended hereto (Exhibit A), which is made a substantive part of this award.

Second. These rates are to be retroactive for employees in the shipyards of San Francisco Bay district from September 22, for those in the shipyards of the Columbia River district from September 5, and for those in the yards of the Puget Sound district from August 1.

Third. The shipyard owners shall pay to employees who were employed by them during the interval from the dates specified above for the respective districts and the dates when the new rates fixed by this award are put into effect, back pay for all the time they worked in such interval equal to the difference between their wages calculated at the new rates and the wages they actually received, such back pay to be paid within two weeks after this decision is to take effect.

Fourth. Rates of wages now being paid in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Fifth. The working conditions in the shipyards of the San Francisco Bay district shall be those agreed to by the representatives of employers and employees in said district as appended hereto (Exhibit B), which agreement is made a substantive part of this award.

Sixth. The working conditions in the shipyards of the Columbia River district shall be those heretofore established by the parties according to the terms of Exhibit C hereto appended, which is made a substantive part hereof and all existing craft conditions not changed by same Exhibit C shall remain unchanged unless modified by agreement of the parties approved by this board; provided that double time shall be paid for work on holidays and on Saturday afternoons in June, July, and August, and that rate of payment for work in excess of eight hours a day shall be fixed by mutual agreement or, failing agreement, by the examiner for the Columbia River district.

Seventh. The working conditions in the shipyards of the Puget Sound district shall be determined by collective agreement of the employers and employees in the shipyards of said district, subject to the approval of the board.

Eighth. This decision shall apply to all shipyards of the San Francisco Bay, Columbia River, and Puget Sound districts which were involved in disputes with their employees during September or October, 1917.

Ninth. In accordance with the understanding reached by all parties throughout the coast district, no change shall be made in any existing craft conditions nor shall any new craft conditions be established until the same shall have been agreed upon between employer and employee, subject to the approval of this board.

Tenth. This decision shall be put into effect on or before Monday, November 12, 1917.

VII. *Spirit of good will by both sides.*—In conclusion we wish to record our appreciation of the cooperation spirit displayed by both employers and employees as shown by the action of the employees in all three cities in returning to work while awaiting our decision.

We wish to express our special indebtedness for valuable assistance and advice to Mr. Gavin McNab, of San Francisco; to Mr. James A. Franklin, president International Brotherhood of Boiler Makers, Iron Shipbuilders and Helpers of America; to Mr. James Wilson, president Pattern Makers' League of North America; to Mr. William H. Johnston, president International Association of Machinists; Mr. Milton Snellings, president International Union of Steam and Operating Engineers; and Mr. James V. Ryan, organizer, Amalgamated Sheet Metal Workers, International Alliance.

The memorandum to which this board owes its existence provides for the selection of an examiner in each district to act for the board in the settlement of disputes which can not be settled by the employees and employers immediately concerned, or by the district officer of the Emergency Fleet Corporation. Appeal from the decision of the examiner may be taken by either side to the board.

We hereby appoint, as examiner of the Puget Sound district, ex-Gov. Henry McBride of Seattle, and as examiner of the Columbia River district, Mr. Richard W. Montague of Portland.

V. EVERIT MACY, *Chairman.*
LOUIS A. COOLIDGE.
A. J. BERRES.

(Approved except as to wage scale.)

SAN FRANCISCO, CAL., *November 4, 1917.*

EXHIBIT "A."

Minimum-wage scale for journeymen, specialists, helpers and laborers in specified crafts, established by board in decision of Nov. 4, 1917.

Machinists	$5.25
Machinists, specialists	4.00
Machinists' helpers	3.60
Molders	5.25
Pattern makers	6.50
Blacksmiths	5.25
Blacksmiths' helpers	3.90
Anglesmiths	5.25
Heaters	4.50
Pipe fitters	5.25
Pipe fitters' helpers	3.60
Coppersmiths	6.00
Coppersmiths' helpers	3.90
Firemen	3.60
Sheet-metal workers	6.00
Sheet-metal workers' helpers	3.60
Painters	5.00
Painters, bitumastic	6.00
Flange turners	6.00
Angle and frame setters	5.25
Pressmen	5.25
Boiler makers	5.25
Ship fitters	5.25
Riveters, chippers, and calkers	$5.25
Acetylene welders	5.25
Plate hangers	5.00
Punch and shear men	4.50
Planer men	4.20
Countersinkers	4.20
Drillers and reamers	4.20
Holders-on	4.20
Slab helpers	3.90
Plate hangers' helpers, hook tenders, flange fire helpers, and machine helpers, flange	3.90
Boiler makers' helpers	3.90
Ship fitters' helpers	3.60
Rivet heaters	3.15
Electrical workers	5.25
Electrical workers' helpers	3.60
Molders' helpers	3.60
Foundry carpenters	4.50
Furnace men	4.50
Casting cleaners	3.90
Laborers	3.25

Wooden-ship yards.

Shipwrights, joiners, boatbuilders, and millmen	$6.00
Calkers	6.50
Laborers and helpers	3.25

Supplementary rates established by Emergency Fleet Corporation Dec. 10, 1917.

Stationary and operating engineers	$5.25	(San Francisco.)	
Firemen, oilers, and water tenders	3.60	Frost and asbestos workers	$5.25
Lofts men	6.00	Metal polishers and finishers	5.25
Rivet heaters	3.60	Bridge and structural-iron workers	5.25
Shipyard riggers:		(Seattle.)	
Foremen	6.00	Storekeepers, watchmen, and janitors	3.60
Journeymen	5.00		

Supplementary rates established by examiner Henry McBride for Puget Sound District, Dec. 14, 1917.

Engineers:		Steam and electrical operators in power houses	$5.50
Locomotive cranes	$6.00	Engineers in charge of boilers	5.00
Gantry cranes	6.00	Firemen with engineer in charge	4.00
Double cable ways	6.00	Oilers	4.50
All double machines	6.00	Furnace men	4.50
Electrical, steam, or air operated winches and donkeys	6.00	Single-drum steam, electric, or air winches and donkeys, not hoisting	4.50
Single aerial cables, ways	5.50		
Overhead cranes (in shops)	5.50		

Wooden-ship yards, Dec. 22, 1917.

Fasteners	$4.50

To these rates 10 per cent increase was added for all men who work for six consecutive days in any week, a total of not less than 48 hours, by order of Fleet Corporation on December 10, effective on and after December 15.[1]

Exhibit "B."

Agreement as to working conditions in San Francisco district.

First. That each party to this agreement agrees and consents to the following rules and regulations which shall govern the mutual relations of the parties herein mentioned.

Second. Eight hours shall constitute a day's work and be worked between the hours of 8 a. m. and 5 p. m., provided, however, that this shall not interfere with the introduction of shifts, also that certain objections applying to the starting and quitting time in some of the trades be removed by the Iron Trades Council. Saturday half holiday for the months of June, July, and August will be in effect 1918.

Third. All time worked over the regular eight-hour day shall be paid for at the rate of time and one-half for the first three hours, after which double time shall be paid, excepting that after February 1 double time shall be paid for all overtime. Double time shall be paid for Sundays and the following holidays: New Year's Day, Washington's Birthday, Memorial Day, July Fourth, Labor Day, Admission Day, Thanksgiving Day, Christmas Day, and on election days for governor and President

[1] This bonus was made a regular wage increase for all trades in this Exhibit. See pp. 73 and 74.

only. An additional 5 per cent shall be added to the daily rate of all men working night shifts.

Fourth. Under no circumstances shall any work be performed on Labor Day except to preserve life or property.

Fifth. Such grievances as do not relate to the subject of hours or wages covered by this agreement which may arise in any shop shall be given consideration as follows: Upon complaint being made by either party to this agreement in writing, the duly authorized representative of the firm and the business representative of the union, or the representative of the Iron Trades Council who may be elected to represent the union, shall immediately proceed to the shop or shops where such grievances exist and endeavor to mutually settle the same.

Sixth. Any grievance that can not be settled in this manner must be referred to conference, the call and subject for such conference to be made in writing. This conference shall be called within six days from receipt of notice for the purpose of adjusting the question at issue, and the conference shall continue day after day until the question at issue is settled, unless mutually postponed.

Sixth (*a*). Any disputes which can not be settled by means provided herein shall be referred to the examiner appointed by the Labor Adjustment Board as provided in the memorandum of August 20, 1917, and which is attached hereto and made a part of this agreement.

Seventh. No change shall be made in existing conditions nor any new conditions established by any party to this agreement until the same has been agreed upon in conference. And these conditions shall always be construed so as to promote to the fullest extent the policy of the Government during the period of national need.

Eighth. Employees shall be paid on some regular and definite day of each week, and in no case shall more than a week's pay be held back.

Ninth. During the life of this agreement there shall be no strike on the part of the employees nor lockout on the part of the employers.

Tenth. Any employee laid off, discharged, or quitting of his own volition shall receive all wages due him within 24 hours of the termination of his employment, excepting Sundays and holidays.

Eleventh. Business representatives of the different crafts shall be given access to the shops or yards at the discretion of the management.

Twelfth. This agreement shall be in full force and effect for a period of 12 months from date of signing thereof. Ten months after the signing of this agreement a conference shall be held for the purpose of the consideration of a continuation of the agreement or formation of a new one. This conference committee shall consist of not more than three members from the California Metal Trades Association and the California Foundrymen's Association jointly, and not more than three members from the Iron Trades Council, and the conference shall be held in continuous session and shall proceed until an agreement or deadlock is reached. Nothing in this paragraph shall be construed as superseding in any manner the provisions of the memorandum of August 20, 1917, referred to in paragraph 6 (*a*).

Exhibit "C."

Agreement as to working conditions in the Columbia River district.

First. Eight hours shall constitute a day's work.

Second. All time worked over the regular eight-hour day shall be paid for at rate or rates to be established by the Shipbuilding Labor Adjustment Board, including holidays: New Year's Day, Washington's Birthday, Decoration Day, July Fourth, Labor Day, Thanksgiving Day, Christmas Day, and general election days.

Third. The employees in each craft or calling in a shop or yard shall have the right to select three of their number to represent them as members of a shop committee.

Each member of this committee shall be chosen by majority vote through secret ballot in such manner as the employees shall direct. The chairman of each craft committee shall be a member of the joint shop committee.

Fourth. When a grievance arises it shall be taken up by the committee, first with the foreman, second with the superintendent. In the event the question has not been adjusted the committee shall then take the matter up with the president of the company. If the matter can not be adjusted between the shop committee and the president, the shop committee shall have the right to call into conference with the president a representative chosen by the committee. In case the president fails to adjust the matter satisfactorily it shall be submitted to the examiner to be appointed by the Shipbuilding Labor Adjustment Board as provided in memorandum of August 20, 1917, which is attached hereto and made a part hereof.

Fifth. Employees shall be paid every Saturday at time of quitting work, and in no case shall more than three days' pay be held back. This practice to be put in effect as soon as practicable.

Sixth. Any employee being laid off, discharged, or quitting of his own volition shall within 24 hours receive all wages due him.

Seventh. A trained nurse shall be in attendance to render first aid at all times whenever men are working.

Eighth. So far as practicable and when men are available, all labor in connection with construction work and repairs shall be done by employees in the trade or calling generally recognized as having jurisdiction therein.

Ninth. All questions relating to basic wage scale and overtime shall be left to the determination of the Shipbuilding Labor Adjustment Board, such determination of wages to be retroactive as said board shall direct.

Tenth. Any committeeman appointed hereunder who shall be found to have been discharged without just and sufficient cause after due investigation in the manner herein provided for the adjustment of grievances shall be reinstated with full pay for all time lost.

Eleventh. The question of employing apprentices shall be taken up for adjustment in the manner provided herein for the adjustment of grievances.

Twelfth. In view of the fact that the existing strike was called on account of differences which have now been adjusted, no discrimination shall be practiced in the reemployment of the former employees.

Thirteenth. It is understood and agreed that any concessions of recognized principles by either party to this agreement shall be without prejudice for the sole purpose of assisting the Government in the successful prosecution of the war, but that this agreement shall continue during the period of the war.

On December 8, 1917, the Navy Department and the United States Shipping Board Emergency Fleet Corporation issued two important labor documents. The first relates to a further adjustment of wages and hours of employees in shipyards of the Pacific coast, and is as follows:

STATEMENT SUBMITTED BY THE NAVY DEPARTMENT AND THE UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION.[1]

In order to provide a proper stimulus to increase the output in the shipyards of the Pacific coast, and in order to encourage men who live at great distances to leave their homes and enter on service in the shipyards, the United States Shipping Board

[1] American Federationist, January, 1918, p. 49.

Emergency Fleet Corporation will pay to all employees of shipyards on the Pacific coast, with the exception of those working under the Seattle agreement, a war-service payment of 10 per cent, effective on and after December 15, 1917, to all men who work for 6 consecutive days in any week a total of not less than 48 hours, provided that men prevented from working on account of the elements, physical condition, or any unavoidable cause will not be denied the benefits provided for under this statement, the payment to be computed on straight time at the minimum rate provided in the award; and on February 1, 1918, a further stimulus to attract men to the shipbuilding industry will be provided by converting the above to a permanent increase of 10 per cent of the adjustment-board rates, provided that nothing in this memorandum shall prevent a rehearing of this matter by the wage adjustment board. It is stipulated that for the purpose of such rehearing the award of the adjustment board shall be considered as expiring at all Pacific coast plants six months from the date at which the award became effective in the Puget Sound district—that is, February 1, 1918.

December 8, 1917.

FRANKLIN D. ROOSEVELT.
CHARLES PIEZ.
WILLIAM BLACKMAN.
J. A. FRANKLIN.
JAS. O'CONNELL.
JOHN I. NOLAN.

The second of these statements is a new agreement entered into by the Metal Trades Department of the American Federation of Labor, the Emergency Fleet Corporation, and the Navy Department. This agreement, which is reproduced below, supersedes the agreement of August 20, 1917.

MEMORANDUM FOR THE ADJUSTMENT OF WAGES, HOURS, AND CONDITIONS OF LABOR IN SHIPBUILDING PLANTS.[1]

When disputes arise concerning wages, hours, and conditions of labor in the construction or repair of shipbuilding plants, or of ships in shipyards, under the United States Shipping Board Emergency Fleet Corporation, or under said shipping board, or under contract with said corporation, or with said board; or if questions coming under the jurisdiction of the board arise with reference to such construction in a private plant in which construction is also being carried on for the Navy Department, and attempts at mediation or conciliation between employers and employees have failed, the adjustment of such disputes shall be referred to an adjustment board of three persons, hereinafter called the "board," one to be appointed jointly by the said corporation and the Navy Department, one to represent the public and to be appointed by the President of the United States, and one to represent labor, to be appointed by Samuel Gompers, president of the American Federation of Labor. It is understood, however, that this memorandum shall in nowise serve as a precedent for procedure in Government plants under the War or Navy Departments, except as may be authorized by such departments.

The plant where such construction is being carried on shall be geographically districted by the board. In each district the contractors in whose plants such construction is being carried on, and the representatives of such international labor organizations as have members engaged in such production or construction in such

[1] American Federationist, January, 1918, p. 50.

plants and as are selected for the purpose by the labor member of the board, shall be called upon, under conditions to be laid down by it, to agree upon a person or persons who shall act under the direction of the board as examiner or examiners in such district. If the board deems it advisable itself to name an examiner or examiners, or if the representatives of the contractors and of the labor organization do not agree, then the board shall by unanimous action select a person or persons for such position. The examiner shall be subject to removal by the board at any time by majority vote. It shall be the duty of the district officer of the United States Shipping Board Emergency Fleet Corporation to report promptly to the board and to the examiner of the district, if such examiner shall have been appointed, any dispute with reference to wages, hours, or conditions of labor which he is unable to adjust satisfactorily to the principals concerned.

As basic standards where such construction is being carried on, the board shall use the wage rate prevailing in the district in which such plant or plants are located, provided such wage rates have been established through agreements between employer and employees and are admitted to be equitable. Consideration shall be given by the board to any circumstances arising after such wages, hours, or conditions were established and which may seem to call for changes in wages, hours, or conditions. Where no such agreements exist and where, as in the case of new industrial districts, a proper basis of wages and conditions is difficult to determine, the board shall have the right to put into effect the rates which were awarded after due investigation and determination in other districts in which living conditions and cost of living are substantially the same. The board shall keep itself fully informed as to the relation between living costs in the several districts and their comparison between progressive periods of time. The decisions of the board shall, under proper conditions, be retroactive, and it shall be the duty of the board to make the decision effective. At any time after six months have elapsed following such ratified agreement or any such final decision by the adjustment board on any question as to wages, hours, or conditions in any plant or district, such questions may be reopened by the adjustment board for adjustment upon request of the majority of the craft or crafts at such plant affected by such agreement or decision, provided it can be shown that there has been a general and material increase in the cost of living. The decisions of the board will, in so far as this memorandum may be capable of achieving such result, be final and binding on all parties: *Provided, however*, That either the employers or employees in any district may have the right to appeal from the decision rendered by the adjustment board to a board of review and appeal to be made as follows: Three members to be named jointly by the United States Shipping Board Emergency Fleet Corporation and the United States Navy Department, and three to be named by the president of the American Federation of Labor.

It is hereby stipulated and agreed that this memorandum shall supersede and stand in place of the "Memorandum for the adjustment of wages, hours, and conditions of labor in shipbuilding plants," signed August 20, 1917, and that it shall become effective this 8th day of December, 1917.

FRANKLIN D. ROOSEVELT,
Acting Secretary of the Navy.
CHARLES PIEZ,
Vice President, United States Shipping Board Emergency Fleet Corporation.
WILLIAM BLACKMAN,
Assistant to General Manager.
JAMES O'CONNELL,
President, Metal Trades Department.
JOHN I. NOLAN,
International Molders' Union of North America.
J. A. FRANKLIN,
International President of Boilermakers and Iron Shipbuilders of America.
JAMES WILSON,
President, Pattern Makers' League of North America.
MILTON SNELLINGS,
General President, International Union of Steam and Operating Engineers.
G. C. VAN DORNES,
General Vice President, International Brotherhood of Boilermakers and Helpers.
F. J. MCNULTY,
International Brotherhood of Electrical Workers.
JOHN J. HYNES,
President, Amalgamated Sheet Metal Workers of America.
WILLIAM H. JOHNSTON,
International Association of Machinists, per P. Flaherty.
W. W. BRITTON,
President, International Union of Metal Polishers.

UNITED STATES EMPLOYMENT SERVICE ORGANIZED BY THE DEPARTMENT OF LABOR.

On January 3, 1918, the Secretary of Labor, W. B. Wilson, announced the separation from the Bureau of Immigration, under whose control it has been for the past 10 years, of that branch of the Department of Labor handling employment matters, and its reorganization and expansion immediately in the office of the Secretary of the Department. The Employment Service has been organized as the Nation's war-labor mobilizing and distributing machine and has already become one of the largest and most important war prosecuting agencies of the National Government. In order to disseminate as widely as possible official information connected with the activities of the service, the needs of the Government for workers in all branches of industry and the methods to be pursued by the Employment Service in bringing laborers and jobs together with a view to a speedy and efficient prosecution of the war, a weekly bulletin is now being published, the first issue of which appeared on January 28, 1918.

It is called the "U. S. Employment Service Bulletin," and in this initial issue an editorial announcement is made that "its primary purpose is to distribute information and promote coordination among the officials and employees of the Federal Employment Service and of the cooperating State and municipal employment offices and State councils of defense." The following statement, outlining the work and organization of the Employment Service, has been authorized by the director:

The organization of the Service to meet the labor-distribution problem is one of the features of the national war-labor program, the administration of which has been delegated to Secretary Wilson and the department. It will be the task of the extended Service to furnish millions of workers for the various war industries. It is estimated that by August between 3,000,000 and 4,000,000 workers will be needed in agriculture, shipbuilding, munitions making, and other essential industries.

John B. Densmore, of Montana, for the past five years Solicitor for the Department of Labor, has been appointed Director of the United States Employment Service by Secretary Wilson. Charles T. Clayton, of Maryland, is assistant director.

The details of the operation of this national labor distribution machinery will be managed by four divisions, the chiefs of which, together with the director and assistant director, will constitute a policies board. The statistical data in connection with the employment service will be tabulated and published from time to time by the Bureau of Labor Statistics of the Department of Labor. The following are the four divisions, with the names of their respective chiefs:

Division of Information, Administration, and Clearance.—T. V. Powderly, of Pennsylvania, chief.

Woman's Division.—Mrs. Hilda Muhlhauser Richards, of Ohio, chief.

Division of Reserves.—William E. Hall, of New York, national director of the United States Public Service Reserve and the United States Boys' Working Reserve, chief.

Farm Service Division.—A. L. Barkman, of Missouri, chief.

For several months the Department of Labor has been quietly working to equip the Federal Employment Service to handle efficiently the problems of supplying war labor. Funds appropriated specially by Congress or allotted by the President from his war-emergency fund are believed to be sufficient to conduct the Service until the end of the fiscal year.

The Service is now covering the entire continent with a network of labor exchanges. Federal, State, and municipal employment offices and the facilities of the various State councils of defense are being utilized and made coordinate parts of this comprehensive Federal machine. Complete centralization and unification of all efforts to supply labor are thus effected, eliminating all duplication and waste of effort, time, and expenditures. There are already more than 200 such exchanges in operation, and the immediate establishment of 50 more in various parts of the country is now being arranged.

With these labor exchanges as the medium for the distribution of workers and their placement in the war industries a vast reservoir of skilled and boy workers to meet the additional demands of the essential industries is being created by the United States Public Service Reserve and the United States Boys' Working Reserve, both comprising a division of the Federal Employment Service. The reserves are, in effect, the Service's "recruiting service." Already about 30,000 skilled workers have been enrolled in the Public Service Reserve and approximately 150,000 boys between

the years of 16 and 21 in the Boys' Working Reserve. Both bodies are now placing men and boys in industrial service through the machinery of the Employment Service.

In connection with the work of the Service and its reserves, a corps of traveling examiners is being created. These examiners will cover the country and determine the fitness of applicants for shipbuilding and other war industrial work. They will have the cooperation of the enrolling officers of the Public Service Reserve throughout the country, employers, labor leaders, chambers of commerce, and other business organizations, and patriotic persons generally. By means of these examiners it is anticipated that few men will be placed in positions for which they are not fitted, and there will be real conservation of the available supply of skilled workers. "Maximum service from every worker" is a cardinal principle of the reorganized Employment Service.

The new organization of the United States Employment Service, and particularly its operation as a separate arm of the Department of Labor, meets with the full approval of both employers and employees. Since the entrance of the United States into the War, the American Federation of Labor, speaking for organized labor, and the Chamber of Commerce of the United States, representing employers and the Nation's business men generally, have officially urged the action that has just been taken. Many of the international unions affiliated with the American Federation of Labor recently have pledged assistance to the Public Service Reserve in the enrollment of their members and their placement in "war jobs" as they arise.

The following statement is made by John B. Densmore, director of the newly organized Employment Service:

The United States Employment Service can successfully meet the problem of war-labor supplying if full support is given by both workers and employers. Our task will be made easier when the country as a whole realizes that a national labor shortage is a myth and that a conscription of labor is both impracticable and unnecessary.

There is no real labor shortage. While there exists a scarcity of workers in a few of the highly skilled and unusual trades, the apparent general labor shortage, especially in Pennsylvania and other industrial States, has been due to a lack of distribution facilities. In some sections there are large surpluses of workers, and these will be taken to the shorthanded regions as quickly as possible. Our national labor problem is primarily one of proper distribution, and the new organization of the Employment Service provides adequate facilities. The leading trades-unions and business organizations of the country are now cooperating with the United States Employment Service, and will assist in the distribution of labor and in the enrollment of workers for "war service" in the United States Public Service Reserve.

EFFECT OF DILUTION OF LABOR IN A SHELL FACTORY.

The following article on the effect of dilution of labor in one of the national shell factories of Great Britain is reprinted, by special permission, from the Dilution of Labor Bulletin, published by the British Ministry of Munitions, December, 1917.

Experience has frequently shown how uneconomical it is to employ a highly skilled mechanic on work of a repetition nature. Always supposing that there is no conscious restriction of output on the man's part, his pride of craftsmanship impels him to spend time in producing a finish and an accuracy greater than the nature of the work demands. Moreover, as a rule he does not take kindly to the easy and fool-proof methods of manufacture which give no opportunity for the use of his experience and trained intelligence. It is to the national interest, and should be to the man's own interest, that he should be employed on work which really needs his skill, and which can not be done without it.

The unskilled man or woman, when introduced to a job, has nothing to unlearn; and provided that the operations have been laid out systematically beforehand, as they should have been, the unskilled operator has very little to learn. In view of what has been said above, therefore, it is not surprising that with proper tools and supervision, he will frequently, and one might perhaps say generally, attain an output which the skilled supervisor himself could not equal. It must not always be assumed that this is discreditable to the skilled mechanic. It is, however, always to his credit that he can train unskilled labor to such a degree of efficiency, and it proves conclusively that his proper place is that of a charge hand rather than that of a machine operator.

The following case, recorded by one of the national shell factories, may be mentioned as one example out of many where a markedly greater output has resulted from the substitution of unskilled labor for skilled labor. The factory in question is producing 9.2-inch Mark IX H. E. shell, and the boring of the interior of the shell is done in three distinct operations, namely, rough-boring the body, rough-boring the head, and finish-boring the complete shell. The work is done on Lang boring lathes, and the appended table gives the comparison between the output of skilled men and women under identical conditions.

TABLE I.

Operation.	Average output per 10-hour shift.	
	Skilled men.	Women.
Rough-boring parallel part of body	8	First week 7
		After 6 weeks 17
		After 10 weeks 20
		At present 24
Rough-boring head to blend with body.	11	After 1 week 8½
		After 6 weeks 14
		After 10 weeks 18
		After 14 weeks 20
		At present 24
Finish-boring shell	10	After 1 week 10
		After 5 weeks 14
		After 9 weeks 20
		At present 24

It will be seen that whereas the complete boring of the shell required 3.16 machine-hours when done by skilled men, it was accomplished in 3.6 hours by women after only one week's practice, and within two or three months the women had reduced

the time to 1.25 hours, thus increasing the output to two and a half times its previous figure.

Several months ago, as a result of the visit of officers of the ministry to the factory in question, 73 skilled men were enrolled as war-munitions volunteers and transferred to other works. Unskilled and semiskilled men to the number of 133 were released, and the places of all the above men were taken by females.

Table II shows the change that has been brought about since the beginning of the year in the 9.2-inch shell shop and the 4.5-inch shell shop and the copper-band shop, respectively. The figures speak for themselves, but the greatly increased output in both shops, corresponding with the increase in the percentage of women and discharged soldiers employed, is worthy of special notice.

TABLE II.

9.2-inch shell shop.

	January, 1917.	October, 1917.	Per cent of increase (+) or decrease (−).
Men (excluding discharged soldiers)	123	61	− 50.4
Discharged soldiers	.....	17	.....
Women	79	137	+ 73.4
Boys	.....	10	.....
Total	202	225	+ 11.4
Shell output per month	950	2,369	+149.3
Shell output per employee	4.7	10.5	+123.4

4.5-inch shell shop.

Men (excluding discharged soldiers)	164	83	−49.4
Discharged soldiers	.....	17	.....
Women	358	530	+48.1
Boys	19	2	−89.5
Total	541	632	+16.8
Shell output per month	19,000	30,000	+57.9
Shell output per employee	35.1	47.4	+35.0

Copper-band department.

Men (excluding discharged soldiers)	38	32	− 15.7
Discharged soldiers	.....	5	.....
Women	85	124	+ 45.9
Boys	.....	11	.....
Total	123	172	+ 39.8
Output per month (all sizes)	160,000	392,000	+145.0
Output per employee	1,300	2,284	+ 76.5

With regard to the output of 9.2-inch shells, it will be observed that the proportion of women to total employees is now practically 61 per cent. This is a very creditable proportion, and contrasts very favorably with the conditions existing in many shops engaged upon the same class of shell. Dilution, however, is still proceeding and it is confidently anticipated that an output of 3,000 shells per month will be obtained with a still higher proportion of women and discharged soldiers. Excellent as the present position and the future prospects are, the place of honor is probably held by the 9.2-inch shell factory referred to in the November issue of the Bulletin. In this factory, where women operate the whole of the machines and do all the laboring, the

proportion of women to total employees is just on 90 per cent and the output of completed shell per employee per month is over eighteen.

In the 4.5-inch shell shop of the national factory under consideration the machines were not originally designed for shell work and are in a bad state of repair. Moreover, during the period under review over 15,000 shells of exceptionally hard steel have had to be made, otherwise the increase of output would have been greater even than it has been.

The facts given in this article should be of material assistance in convincing engineers that there is nothing incompatible in the apparently contradictory duties laid upon them in the national interest, firstly to increase the output of munitions, secondly to release every skilled and able-bodied man for work which only such men can do, and lastly but not least important, to find remunerative occupation for discharged soldiers "broken in our wars."

BRITISH GOVERNMENT'S ATTITUDE ON JOINT STANDING INDUSTRIAL COUNCILS.[1]

The British War Cabinet has decided to adopt the Whitley report on joint standing industrial councils as a part of the policy which it hopes to carry into effect in the field of industrial reconstruction. This report proposed the establishment of such councils in the various industries where they do not already exist, to be composed of representatives of employers and employees, for the purpose of considering matters affecting the industry, and particularly the establishment of a closer cooperation between employers and workers. The report was published in full in Bulletin 237 of this bureau. To answer certain questions which have been raised regarding the purpose of establishing industrial councils, the minister of labor, under date of October 20, 1917, addressed the following letter to the leading employers' associations and trade-unions, explaining in full the Government's view of the proposals of the report:

SIR: In July last a circular letter was addressed by the Ministry of Labor to all the principal employers' associations and trade-unions asking for their views on the proposals made in the report of the Whitley committee on joint standing industrial councils, a further copy of which is inclosed. As a result of the replies which have been received from a large number of employers' organizations and trade-unions generally favoring the adoption of those proposals, the War Cabinet have decided to adopt the report as part of the policy which they hope to see carried into effect in the field of industrial reconstruction.

In order that the precise effect of this decision may not be misunderstood, I desire to draw attention to one or two points which have been raised in the communications made to the ministry on the subject, and on which some misapprehension appears to exist in some quarters.

In the first place, fears have been expressed that the proposal to set up industrial councils indicates an intention to introduce an element of State interference, which has hitherto not existed in industry. This is not the case. The formation and constitution of the councils must be principally the work of the industries themselves.

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[1] Great Britain, Ministry of Labor. Industrial Reports. No. 1. Industrial councils. The Whitley report, together with the letter of the minister of labor explaining the Government's view of its proposals. 1917. 19 pp. Price 1d.

Although, for reasons which will be explained later, the Government is very anxious that such councils should be established in all the well-organized industries with as little delay as possible, they fully realize that the success of the scheme must depend upon a general agreement among the various organizations within a given industry and a clearly expressed demand for the creation of a council. Moreover, when formed, the councils would be independent bodies, electing their own officers, and free to determine their own functions and procedure with reference to the peculiar needs of each trade. In fact, they would be autonomous bodies, and they would, in effect, make possible a larger degree of self-government in industry that exists to-day.

Secondly, the report has been interpreted as meaning that the general constitution which it suggests should be applied without modification to each industry. This is entirely contrary to the view of the Government on the matter. To anyone with a knowledge of the diverse kinds of machinery already in operation, and the varying geographical and industrial conditions which affect different industries, it will be obvious that no rigid scheme can be applied to all of them. Each industry must therefore adapt the proposals made in the report as may seem most suitable to its own needs. In some industries, for instance, it may be considered by both employers and employed that a system of works committees is unnecessary, owing to the perfection of the arrangements already in operation for dealing with the difficulties arising in particular works between the management and the trade-union officials. In other works committees have done very valuable work where they have been introduced and their extension on agreed lines deserves every encouragement. Again in industries which are largely based on district organizations it will probably be found desirable to assign more important functions to the district councils than would be the case in trades which are more completely centralized in national bodies. All these questions will have to be thrashed out by the industries themselves and settled in harmony with their particular needs.

Thirdly, it should be made clear that representation on the industrial councils is intended to be on the basis of existing organizations among employers and workmen concerned in each industry, although it will, of course, be open to the councils, when formed, to grant representation to any new bodies which may come into existence and which may be entitled to representation. The authority, and consequently the usefulness of the councils will depend entirely on the extent to which they represent the different interests and enjoy the whole-hearted support of the existing organizations, and it is therefore desirable that representation should be determined on as broad a basis as possible.

Lastly, it has been suggested that the scheme is intended to promote compulsory arbitration. This is certainly not the case. Whatever agreements may be made for dealing with disputes must be left to the industry itself to frame, and their efficacy must depend upon the voluntary cooperation of the organizations concerned in carrying them out.

I should now like to explain some of the reasons which have made the Government anxious to see industrial councils established as soon as possible in the organized trades. The experience of the War has shown the need for frequent consultation between the Government and the chosen representatives of both employers and workmen on vital questions concerning those industries which have been most affected by war conditions. In some instances different Government departments have approached different organizations in the same industry, and in many cases the absence of joint representative bodies which can speak for their industries as a whole and voice the joint opinion of employers and workmen, has been found to render negotiations much more difficult than they would otherwise have been. The case of the cotton trade, where the industry is being regulated during a very difficult time by a joint board of control, indicates how greatly the task of the State can be alleviated

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by a self-governing body capable of taking charge of the interests of the whole industry. The problems of the period of transition and reconstruction will not be less difficult than those which the War has created, and the Government accordingly feel that the task of rebuilding the social and economic fabric on a broader and surer foundation will be rendered much easier if in the organized trades there exist representative bodies to which the various questions of difficulty can be referred for consideration and advice as they arise. There are a number of such questions on which the Government will need the united and considered opinion of each large industry, such as the demobilization of the forces, the resettlement of munition workers in civil industries, apprenticeship (especially where interrupted by war service), the training and employment of disabled soldiers, and the control of raw materials; and the more it is able to avail itself of such an opinion the more satisfactory and stable the solution of these questions is likely to be.

Further, it will be necessary in the national interest to insure a settlement of the more permanent questions which have caused differences between employers and employed in the past, on such a basis as to prevent the occurrence of disputes and of serious stoppages in the difficult period during which the problems just referred to will have to be solved. It is felt that this object can only be secured by the existence of permanent bodies on the lines suggested by the Whitley report, which will be capable not merely of dealing with disputes when they arise, but of settling the big questions at issue so far as possible on such a basis as to prevent serious conflicts arising at all.

The above statement of the functions of the councils is not intended to be exhaustive, but only to indicate some of the more immediate questions which they will be called upon to deal with when set up. Their general objects are described in the words of the report as being "to offer to workpeople the means of attaining improved conditions of employment and a higher standard of comfort generally, and involve the enlistment of their active and continuous cooperation in the promotion of industry." Some further specific questions, which the councils might consider, were indicated by the committee in paragraph 16 of the report, and it will be for the councils themselves to determine what matters they shall deal with. Further, such councils would obviously be the suitable bodies to make representations to the Government as to legislation, which they think would be of advantage to their industry.

In order, therefore, that the councils may be able to fulfill the duties which they will be asked to undertake, and that they may have the requisite status for doing so, the Government desire it to be understood that the councils will be recognized as the official standing consultative committees to the Government on all future questions affecting the industries which they represent, and that they will be the normal channel through which the opinion and experience of an industry will be sought on all questions with which the industry is concerned. It will be seen, therefore, that it is intended that industrial councils should play a definite and permanent part in the economic life of the country, and the Government feels that it can rely on both employers and workmen to cooperate in order to make that part a worthy one.

I hope, therefore, that you will take this letter as a formal request to your organization on the part of the Government to consider the question of carrying out the recommendations of the report so far as they are applicable to your industry. The Ministry of Labor will be willing to give every assistance in its power in the establishment of industrial councils, and will be glad to receive suggestions as to the way in which it can be given most effectively. In particular, it will be ready to assist in the convening of representative conferences to discuss the establishment of councils, to provide secretarial assistance and to be represented, if desired, in a consultative capacity at the preliminary meetings. The Ministry will be glad to be kept informed of any progress made in the direction of forming councils. Although the scheme is only

intended, and indeed can only be applied, in trades which are well organized on both sides, I would point out that it rests with those trades which do not at present possess a sufficient organization to bring it about if they desire to apply it to themselves.

In conclusion, I would again emphasize the pressing need for the representative organizations of employers and workpeople to come together in the organized trades and to prepare themselves for the problems of reconstruction by forming councils competent to deal with them. The Government trust that they will approach these problems not as two opposing forces each bent on getting as much and giving as little as can be contrived, but as forces having a common interest in working together for the welfare of their industry, not merely for the sake of those concerned in it, but also for the sake of the nation which depends so largely on its industries for its well-being. If the spirit which has enabled all classes to overcome by willing cooperation the innumerable dangers and difficulties which have beset us during the War is applied to the problems of reconstruction, I am convinced that they can be solved in a way which will lay the foundation of the future prosperity of the country and of those engaged in its great industries.

I am, sir, your obedient servant,

GEO. H. ROBERTS.

AGREEMENT BETWEEN ENGINEERING EMPLOYERS' FEDERATION AND TRADE-UNIONS IN GREAT BRITAIN.

In the latter part of 1917 a serious strike of airplane workers occurred at Coventry, England, in which the matter of the appointment and functions of shop stewards became acute. An agreement was finally entered into between the Engineering Employers' Federation and the trade-unions concerned, the text of which, taken from the London Morning Post of December 24, 1917, has been sent by the American consul general at London to the State Department and forwarded to this bureau. It appears that the Amalgamated Society of Engineers, the Scientific Instrument Makers' Union, and the Enginemen's Union did not subscribe to the terms, their representatives not being present when the settlement was drawn up, but it is understood by the Engineering Employers' Federation that the two last-mentioned unions are willing to agree to the settlement, although the Amalgamated Society of Engineers still remains outside. The agreement covering regulations regarding the appointment and functions of shop stewards is as follows:

With a view to amplifying the provisions for avoiding disputes it is agreed:

1. The workmen who are members of the above-named trade-unions, employed in a federated establishment, may appoint representatives from their own number to act on their behalf in accordance with the terms of the agreement.

2. The representatives shall be known as shop stewards.

3. The method of election of shop stewards shall be determined by the trade-unions concerned, and each trade-union parties to this agreement may appoint shop stewards.

4. The names of the shop stewards and the shop or portion of a shop in which they are employed and the trade-union to which they belong shall be intimated officially by the trade-union concerned to the management on election.

5. Shop stewards shall be subject to the control of the trade-unions, and shall act in accordance with the rules and regulations of the trade-unions and agreements with employers so far as these affect the relation between employers and workpeople.

6. In connection with this agreement shop stewards shall be afforded facilities to deal with questions raised in the shop or portion of a shop in which they are employed. In the course of dealing with these questions they may, with the previous consent of the management (such consent not to be unreasonably withheld) visit any other shop or portion of a shop in the establishment. In all other respects they shall conform to the same working conditions as their fellow workmen.

7. Employers and shop stewards shall not be entitled to enter into any agreement inconsistent with agreements between the Engineering Employers' Federation or local associations and the trade-unions.

8. The function of shop stewards, so far as they are concerned with the avoidance of disputes, shall be exercised in accordance with the following procedure:

(*a*) A workman or workmen desiring to raise any question in which he or they are directly concerned shall in the first instance discuss the same with his or their foreman. (*b*) Failing settlement, the question shall, if desired, be taken up with the management by the appropriate shop steward and one of the workmen directly concerned. (*c*) If no settlement is arrived at the question may, at the request of either party, be further considered at a meeting to be arranged between the management and the appropriate shop steward, together with a deputation of the workmen directly concerned. At this meeting the organizing district delegate may be present, in which event a representative of the employers' association shall also be present. (*d*) The question may thereafter be referred for further consideration in terms of the provisions for avoiding disputes. (*e*) No stoppage of work shall take place until the question has been fully dealt with in accordance with this agreement and with the provisions for avoiding disputes.

9. In the event of a question arising which affects more than one branch of trade or more than one department of the works the negotiation thereon shall be conducted by the management with the shop stewards concerned. Should the number of shop stewards concerned exceed seven a deputation shall be appointed by them, not exceeding seven, for the purpose of the particular negotiation.

10. Negotiations under this agreement may be instituted either by the management or by the workmen concerned.

11. The recognition of shop stewards is accorded in order that a further safeguard may be provided against disputes arising between the employers and their workpeople.

12. Any questions which may arise out of the operation of this agreement shall be brought before the executive of the trade-union concerned or the federation as the case may be.

DECREASE IN NIGHT WORK OF WOMEN IN FRANCE.[1]

The need for intensifying the production of war munitions and material has, since the beginning of the war, led in France to a relaxation of the laws and regulations concerning the maximum duration of the working day, concerning the labor of women and children, and concerning night work. Especially as regards night work for women, frequent exemptions from the law have been

[1] From report of C. W. A. Veditz, American Commercial Attaché, Paris, to Department of Commerce.

granted. But serious social disadvantages soon became apparent as the result of these exemptions, and the public authorities began restricting their number.

A circular dated June 29, 1916, prescribed certain limits for the employment of women at night work. Then, gradually, employers themselves undertook to restrict further the employment of female labor at night. The result, as shown by an investigation begun by the Ministry of Labor on May 31, 1917, is that female labor at night has been reduced almost to insignificant proportions.

The investigation comprised 787 private industrial establishments, employing at night 58,784 women, or 36 per cent of the total number of women working in these establishments. Of the above number, 519 were under 16 years of age, and 1,576 were between 16 and 18 years of age. The average duration of night work was 10 hours. It is reported that improvements have been made everywhere in the conditions and circumstances affecting the night work of the women. Husband and wife are employed at the same hours, so that they may take their meals together; there are eight-hour shifts, so that night work is required of each shift only one week in three; women are intrusted with the lighter kinds of work; the rest periods have been made more numerous; and female workers living in the same quarter of the town are grouped together in the factory.

In the belief that in the interest of the family further modifications might be made in the same direction without jeopardizing the requirements of the national defense, the committee in charge of female labor conditions gave expression to a certain number of desiderata which will soon be carried into effect. It is urged that no girls or women under 18 years of age be employed at night, and that night work for women in no case be permitted to last longer than 10 hours. It is also urged that night work for women of all ages, tolerated since the beginning of the war by suspension of the rules on this subject, shall be suppressed whenever the conditions affecting the supply of raw materials, of motive power, and of labor, are such as to make it possible to obtain the same output by means of day labor alone; that when the output of a factory is decreased night work be curtailed first of all for women; that whenever the hours of labor are decreased, the reduction apply first to night work; that so far as possible, mobilized married laborers be sent by preference to shops and factories in which their wives are engaged.

It is evident from these steps that the French authorities are giving serious thought to the readjustment of the labor situation, especially as it affects women employed in munitions works, that will be necessary after the cessation of hostilities.

PROVISION FOR DISABLED SOLDIERS AND CIVILIANS.

PROBLEM OF THE HANDICAPPED MAN IN INDUSTRY.

BY CARL HOOKSTADT.

The reemployment of the partially disabled and handicapped men in industry presents many complex and difficult problems. Assuming that an injured man has received full compensation benefits in accordance with the law and has been functionally restored and industrially reeducated, what then? From the industrial and compensation viewpoint he constitutes an extrahazardous risk. Not only is he more liable to injury and to be a greater source of danger to his fellow workmen than a normal man, but the consequences resulting from an injury would be greatly increased. The loss of an eye of a normal worker causes disability variously estimated at 30 per cent, and compensation is granted usually for 100 weeks. The loss of the second eye of a man who had already lost one eye would result in permanent total disability, which is usually compensable for life. Under the circumstances discrimination against the employment of such physically defective men would be a natural consequence. In fact, such discrimination has been and is being constantly practiced by employers throughout the country. However, assuming that the partially disabled would not be discriminated against, what effect would the employment of such men have upon wages? Would it result in lowering the labor standards? Would it mean the displacement of the normal workman by the crippled workman? Instances are on record where standard workers have been displaced by crippled workers at lower wages. Furthermore, the reemployment of the partially disabled men should be earnestly considered in conjunction with the whole problem of employment and unemployment of normal workers. Surely, unemployment of the physically normal is just as important a social problem as the unemployment of the physically defective. Organized labor may well look askance at any scheme of rehabilitation which does not also include a plan for the protection of labor standards. All these questions must be considered in working out a practical and equitable plan.

The foregoing problems are primarily concerned with the industrially disabled. More difficulties arise when the military cripples are considered. At the present time the Federal Government through its Bureau of War-Risk Insurance pays compensation benefits to our soldiers and sailors disabled in the service, and provision has also been made for their functional and professional rehabilitation. Presumably compensation payments will continue until the men are replaced in industrial and commercial life. But again we are confronted with the present disinclination and the probable future refusal to give employment to such men. Sentiment and patriotic ardor can not be relied upon to solve the problem. It has been suggested that in order to prevent industrial discrimination against disabled men a premium be placed upon their employment by relieving the employer of the extrahazardous risks which such employment would entail.

Very few of the States have attempted a solution of this problem. The provisions of the 40 State and Territorial compensation laws relating to compensation for second or successive injuries are as follows: Eight States [1] provide that compensation for second injuries shall be computed on the basis of the disability caused by that particular injury without reference to previous injuries. Fifteen States [2] provide that compensation for second injuries shall be determined by subtracting the disability caused by the prior injury from the whole disability caused by subsequent injury. The phraseology used in some of the laws, however, is indefinite and susceptible of more than one interpretation. Of these 15 States, 4—Kansas, Kentucky, Nevada, and Wyoming—definitely state that compensation for subsequent injuries shall be based upon the disability caused by such injuries minus the disability caused by previous injuries; 4 States—Maryland, Montana, Oregon, and Washington—provide that compensation shall be determined in accordance with the combined effect of the injuries and past compensation paid; 2—Illinois and South Dakota—state that compensation shall be apportioned according to the proportion of incapacity caused by the respective injuries; while 5—Maine, Michigan, Oklahoma, Rhode Island, and Wisconsin—provide merely that compensation shall be based on the reasonable earning capacity of the employee at the time of the later injury; but in Wisconsin greater compensation is awarded for second injuries (eye and hearing only) than for primary injuries. Seventeen States [3] make no specific provision in this

[1] California, Colorado, Indiana, Delaware, Minnesota, Nebraska, New York, and Texas.

[2] Illinois, Kansas, Kentucky, Maine, Maryland, Michigan, Montana, Nevada, Oklahoma, Oregon, Rhode Island, South Dakota, Washington, Wisconsin, and Wyoming.

[3] Alaska, Arizona, Connecticut, Hawaii, Idaho, Iowa, Louisiana, Massachusetts, New Hampshire, New Jersey, New Mexico, Ohio, Pennsylvania, Porto Rico, Utah, Vermont, and West Virginia.

respect, but undoubtedly the administrative commissions or courts have ruled upon the question in cases coming before them for adjudication. In Massachusetts and West Virginia, compensation is granted for the entire disability resulting from the subsequent injury. For example, compensation for total permanent disability would be awarded for the loss of a second eye.

A better conception of the different provisions in force in the various States may perhaps be obtained by way of illustration. What would be the effect, for example, of the loss of the second hand in the several classes of States. In Indiana compensation would be limited to 55 per cent of the weekly wages for 150 weeks. In New York the employee would receive 66⅔ per cent of his weekly wages for 244 weeks and at the expiration of this period an additional 66⅔ per cent for life; such additional compensation to be paid out of a special fund and not be borne by the employer in whose employment the injury was sustained. In Kentucky the employee would be entitled to 65 per cent of weekly wages for permanent total disability (416 weeks) minus the compensation for loss of the first hand (150 weeks) or 266 weeks. While in Massachusetts the employee would receive 66⅔ per cent of his wages for 50 weeks for the loss of the hand; 66⅔ per cent of wages additional for total disability during the healing period; and a further 66⅔ per cent of his *wage loss* for partial disability for not exceeding 500 weeks.

From the viewpoint of workmen's compensation, the disabled and handicapped workman presents two main problems: First, on what basis should a workman already partially disabled be compensated when he sustains a second injury which produces greater disability than would have resulted had he not had the previous injury? Second, to what extent will the future wages of such disabled workmen and the discrimination against them, in their endeavor to obtain employment in industry, be affected by the statutory liability of the employer provided for in the compensation law?

As to the first problem: The whole purpose of compensation legislation would be defeated if injured employees are not to be compensated at least in accordance with their loss of earning capacity. It makes no difference, for example, to a totally disabled workman whether the disability was caused by a single accident or by several successive accidents. The ability of an armless man to earn a livelihood is not affected by the fact as to whether he lost both his arms at once or one at a time. He is totally and permanently disabled and compensation should be based upon this fact.

As to the second problem: It is undoubtedly true that thereare many employers who, from unselfish and patriotic motives, will employ disabled men even if such men will become extra hazardous

risks and their employment result in financial loss. But the future welfare of our industrial and military cripples can not for a moment be left to the mercy and generosity of the employers of the country, no matter how exalted their motives or how generous their practices. Common economic justice demands that these men have full legal protection.

What then are some of the practical methods through which justice to the worker and equity to the employer can be secured. The New York compensation law is the only act in which an effort has been made to solve this problem. This law provides that an employee who is suffering from a previous disability shall not receive compensation for a later injury in excess of the compensation allowed for such injury when considered by itself and not in conjunction with the previous disability. However,

> If an employee who has previously incurred permanent partial disability through the loss of one hand, one arm, one foot, one leg, or one eye incurs permanent total disability through the loss of another member or organ, he shall be paid, in addition to the compensation for permanent partial disability provided in this section and after the cessation of the payments for the prescribed period of weeks, special additional compensation for the remainder of his life to the amount of 66⅔ per centum of the average weekly wage earned by him at the time the total permanent disability was incurred. Such additional compensation shall be paid out of a special fund created for such purpose in the following manner: The insurance carrier shall pay to the State treasurer for every case of injury causing death in which there are no persons entitled to compensation the sum of $100. The State treasurer shall be the custodian of this special fund, and the commission shall direct the distribution thereof.[1]

One method, therefore, would be the extension of the New York plan to all the other compensation States; but instead of limiting the scope to certain major injuries, as provided for in New York, it should be increased to include all permanent partial disabilities. The liability of an employer for compensation for disability caused by a second injury could be limited to the disability resulting from that particular injury without reference to any prior disabilities. Compensation for the remaining disability could be paid out of a special fund. This fund could be created according to the New York plan, or it could be established by requiring all employers in the State to contribute a small premium sufficient to meet the needs. Such premiums are at present required from employers in Ohio and West Virginia, but for other purposes. The law of Idaho also provides that in fatal cases involving no dependents, the employer must pay $1,000 into the industrial administration fund.

Another suggestion, rather sweeping and drastic in character, would be to prohibit employers from carrying their own risk and compelling every employer to insure either in the State insurance

[1] New York compensation act, sec. 15, par. 7.

fund or in private casualty companies. Undoubtedly, discrimination against the employment of disabled workers is more prevalent among self-insurers than among insured employers, because there is a greater and more direct connection between the accident and the cost of compensation. If all employers are insured, the employment of the disabled will be reflected in a general increased premium rate, but the individual employer would not be penalized because of the employment of cripples. Discrimination against such employers by insurance companies could be prevented by appropriate legislation.

The above plans, of course, would be applicable only to States having compensation laws and then only to those employments covered by these laws. Eleven States and the District of Columbia have no workmen's compensation laws. Furthermore, only one or two of the State laws cover agriculture and domestic service, while over one-third do not include the professions, trades, and other nonhazardous employments. On the other hand, our soldiers are drawn from every State in the Union and from every walk of life, and this fact must be taken into account in the formulation of an adequate and just plan.

The United States Bureau of War-Risk Insurance recently called a conference composed of Federal and State compensation officials, representatives of labor organizations and insurance carriers, and other experts in workmen's compensation. As a result of this conference a committee was appointed to draw up two plans embodying the conclusions reached.

The first plan is simple. Its underlying principle is that the disabled soldiers and sailors are wards of the Nation. It provides that the Federal Government shall pay the entire costs of compensation for injuries, including those subsequently sustained in civil life as well as those sustained in the military service. This would place a premium upon the employment of these men and would eliminate any fear of discrimination. It has the further advantage of not being dependent upon State compensation laws. One difficulty, however, is that such disabled men will be entitled to compensation under the State laws for subsequent injuries irrespective of whether the Federal Government pays them for such injuries or not. Nor is it clear whether they waive their right to State compensation, because most of the State laws absolutely forbid waivers of this kind.

The second plan provides that the cost of subsequent injuries shall be shared jointly by the Federal Government and the State, or rather the employers in the State. The employer's liability for compensation shall be limited to the disability caused by the subsequent

injury alone without reference to any prior disabilities. The amounts thus contributed by the several States would vary, however, in accordance with the varying provisions of the laws. Compensation for the remaining disability shall be paid by the United States out of a special fund. In the case of awards for damages in the non-compensation States the Federal Government would bear its proportionate share of the jury award, and the employer would be subrogated to the employee's rights for claims against the United States special fund. The advantage of this plan is that under it the industry bears its share of the cost of industrial accidents, and it would be free of the charge of class legislation. On the other hand, it would give rise to numerous administrative difficulties, both Federal and State, and would, in addition, require amendatory State legislation.

ECONOMIC CONSEQUENCES OF PHYSICAL DISABILITY.

The Red Cross Institute for Crippled and Disabled Men was established for the purpose of training and readjusting to industry men permanently crippled by the War or injured in the course of their employment. To anticipate the need of practical knowledge of how to deal with these problems of industrial readjustment, an investigation was undertaken by the institute during the summer of 1917 into the experiences of cripples in civil life. A recently issued publication entitled "Economic Consequences of Physical Disability; A Case Study of Civilian Cripples in New York City,"[1] describes in detail the methods employed and results obtained by this investigation.

Records of 361 men between the ages of 16 and 55 whose injuries had occurred since January 1, 1915, were obtained from various sources. The investigators visited 20 hospitals in New York City which kept records of amputations, and chose 327 cases for visitation. Of this number, case histories of only 129 were actually obtained. Records of 332 men receiving compensation for injuries which occurred in the course of their employment were obtained from the State Industrial Commission. Most of these were amputation cases. Of this number 172 furnished case histories. The Interborough Rapid Transit Co. furnished records of 10 cases of men injured in employment and receiving compensation and case histories were secured from nine of these.

In addition to the above cases, 33 met incidentally by the investigators in their rounds furnished data and the employment bureau

[1] The Economic Consequences of Physical Disability; A Case Study of Civilian Cripples in New York City, by John Culbert Faries, of the Staff of the Red Cross Institute. New York, Red Cross Institute for Crippled and Disabled Men, 1918. 11 pp. (Publication Ser. 1, no. 2.)

for the handicapped conducted by the Federation of Associations for Cripples supplied the remaining 18 of the 361 cases studied.

The records of the compensation cases were particularly good, since they revealed the man's economic condition. The hospital cases yielded the largest number of men who had not adjusted themselves to industry. Sixty-four of the 129 cases were unemployed, while only 41 of the 172 industrial commission records showed cases of unemployment.

Records were made of the economic experiences of the men visited, including their industrial history before and after accident and any other facts bearing on the problem of readjustment as obtained from the man himself, his family or friends.

The infinite variety of experiences encountered made it impossible to arrive at formulas for dealing with the crippled, but stories of men who have succeeded in spite of handicaps and of those who have not, were found to be suggestive of what may be attempted for others similarly situated.

The following section of the report seems sufficiently suggestive to warrant its reproduction:

The cases chosen for study were mostly those who had suffered an amputation, either by accident or as the result of disease, or who had lost the use of a member. As the loss of a hand or arm has a different import in industry from the loss of a foot or leg, it will be useful to divide injuries into those to the upper limbs and those to the lower.

Upper limb injuries may be subdivided into those to fingers, hands, and arms. This classification is not accurate, for the function of the hand is abridged by the loss of any finger. Similarly with the foot. But, in general, when a case is put in the class of finger injuries it indicates that the disability was not such as to entirely destroy the use of the hand. Cases classified as hand injuries usually involve extensive injury to the hand, or its amputation. The same may be said of the foot and toes.

TABLE I.

	Cases.	Employed.	Unemployed.	Amputations.	Artificial limb.
Upper limb injuries:					
Fingers	158	133	25	All.	.....
Hands	36	23	13	9	2
Arms	32	17	15	18	7
Total	226	173	53	27	9
Lower limb injuries:					
Toes	11	9	2	All.	.....
Feet	24	9	15	14	5
Legs	92	35	57	65	38
Total	127	53	74	79	43
Miscellaneous	8	3	5	.....	.....
Grand total	361	229	132	106	52

Table I classifies, according to the member affected, the 361 cases whose stories were secured. The largest proportion of finger cases came from the records of the State Industrial Commission and were the results of machine accidents.

Of the 158 finger cases, practically all of which involved amputation, 60 men (38 per cent) were employed after the injury by their former employers at the same or higher wages. They did not always return to the same operation as before—in many instances being given more suitable work. Higher pay was usually the result of a general increase in the scale of wages. Two returned to piecework but found that with their handicaps they could not turn out as much work as formerly and so could not make so high wages.

Seventy-one other finger cases had found some employment, leaving only 25, or about 16 per cent, unemployed at the time they were visited. The finger and toe cases show the smallest proportion unemployed, the proportion of the latter being 18 per cent.

Of the cases of injury to hands, 13 out of 36 were unemployed. Nine of the injuries resulted in amputations with the following results: A former switchman was reemployed by the same company at lower wages as a machinist's helper; a former baker took, with poor success, to peddling pretzels on the street; another baker found employment in a stable; one young man who lost his hand in a machine is studying in an engineering school; the other five were unemployed.

There were 32 cases of injuries to arms, 17 had found employment and 15 had not. Eighteen were cases involving the amputation of the whole or part of the arm. The industrial results in these 18 cases were as follows: 3 were reemployed—1 at the same and 2 at reduced wages; 5 had found work as watchmen or messengers at low wages; 10 were unemployed. Only 1 of these 18 had suffered no diminution in his wages, and this was due, it was quite evident, to his employer's consideration. All of the others had either accepted inferior positions or were idle.

Out of a total of 226 injuries to the upper limbs 173 (76.5 per cent) had found employment, while 53 had not.

The toe cases were unimportant from the viewpoint of industrial readjustment, for the only 2 cases unemployed were still under medical treatment.

The 24 foot cases presented a total of 15 unemployed, 9 of whom were minus a foot. Five others who had lost a foot had some employment, but at reduced wages.

The 92 leg cases involved the largest proportion of amputations and the largest proportion of unemployment. Fifty-seven were idle and 65 had suffered amputations. Of those losing a leg, only three had returned to work for their former employers, as follows: One was a billposter and now folds paper at a lower wage; one was an upholsterer and with the aid of an artificial leg is back at the same work at the same wages; the third, who lost his leg while operating a wire-pulling machine, expected to be reemployed at a different operation, but probably at the same wages. Nineteen more of those losing a leg had found employment of one kind or another.

Amputations are great economic levelers. As will be seen by the following list of employments before and after amputations, the skilled electrician, the engineer, the baker, are all reduced to the level of unskilled labor:

HANDS.

Before.	*After.*
Switchman.	Machinist's helper.
Baker.	Peddling pretzels.
Machine hand.	Studying.
Baker.	Stableman.

ARMS.

Engineer.	Helper in storeroom.
Machine hand.	Same.
Machine hand.	Messenger boy.
Driver.	Watchman.
Electrician.	Watchman.
Machine hand.	Delivery boy.
Ferry hand.[1]	Clerk.
Unknown.[1]	Watchman.

FEET.

Garment worker.	Unknown.
Checker.	Timekeeper.
Deck hand.	Assistant cook.
Longshoreman.	Elevator operator.
Unknown.[1]	Salesman.

LEGS.

Peddler.	Same.
Laborer.	Same.
Bill-poster.	Folder of paper.
Baker.	Tends shop.
Machinist.	Candy store.
Student.[1]	Cashier.
Teamster.	Janitor work.
Butcher.	Same.
Painter.	Employing painter.
Dental mechanic.	Same.
Helper on wagon.[1]	Peddles gum.
Haberdasher.	Jitney bus.
Machine hand.	By same employer.
Auto mechanic.[1]	Repair shop.
Brakeman.	Storekeeper.
Upholsterer.	Same.
Student.	Clerk.
Track inspector.[1]	Peddler.
Coal heaver.[1]	Peddles pencils.
Too young.[1]	Wireless operator.
Too young.[1]	Newsboy.
Too young.[1]	Office boy.

Of the 27 cases who had lost hands and arms only 9 had artificial ones. The high cost of a really efficient hand and arm debars many of the wage-earning class from acquiring them. One man had an expensive arm which he found too heavy. He had discarded it for a lighter device.

Of the nine men wearing artificial hands and arms six were employed. One of the three out of employment could not wear his hand because the stump was sore, and a second had just gotten his arm. The chances for employment seem to be considerably better for a man who has an artificial limb than for one who has not. This is particularly so when a foot or leg is gone. Seventy-nine of the 116 foot and leg cases had suffered amputations, and 43 had artificial limbs. An examination of these 43 cases leads one to believe that the possession and expert use of an artificial leg greatly improve the chances of employment. Twenty men with artificial feet and legs had

[1] Case of long standing.

found employment. The experiences of the 23 who had artificial legs and were unemployed lead one to think that with better health, or with more serviceable legs, most of them would stand a much better chance of employment. Two had new legs which they had not learned to use well; six had difficulty in wearing their legs because of sore stumps; in two cases trouble with the other leg prevented their getting about; in three cases the trouble seemed to be that the legs did not fit properly; three had worked with their artificial limbs but were temporarily idle; one man said the unsightliness of his "peg" leg had lost many jobs for him; one man had lost both legs at different times, and had only one artificial limb; another who had two artificial limbs and had been employed was idle at the time; two were boys who were very active on their artificial legs but were as yet industrially unattached.

The opinion among employers who were interviewed was that there were many occupations that might be filled by leg cripples who had the use of their hands. But it is quite essential that they get about with some facility. Many employers refuse to hire men who use crutches, but do not object to men with artificial limbs. The possession of an artificial limb, therefore, seems to be quite essential to the employment of a leg cripple.

TABLE II.

	Needing training.
Upper limb injuries:	
Fingers	34
Hands	20
Arms	18
Total	72
Lower limb injuries:	
Toes	3
Feet	11
Legs	42
Total	56
Miscellaneous	1
Grand total	129

The number of men who were thought by the investigators to need either reeducation for their old trade, or training for a new occupation, was 129. When each case was carefully considered in the light of the man's age, his education, the kind of work he had done, his attitude toward training, his knowledge of English, etc., the number was narrowed down to 61, who seemed to be hopeful candidates for such training as the Institute might be equipped to do. Probably not all of these could or would enter trade classes, but from this number there could probably be selected a number of condidates who would afford good material for the educational experiment proposed.

VILLAGE SETTLEMENTS FOR DISABLED SOLDIERS IN GREAT BRITAIN.

The following account of a scheme for village settlements intended to combine restorative treatment with industrial and social reconstruction for disabled ex-service men in Great Britain is reprinted from the Lancet for November 3, 1917:

For the past year a group of men and women have been engaged in working out a practical scheme of which the main objects are as follows: (1) To restore disabled

sailors and soldiers to health of mind and body; (2) to train them for settlement in villages and on the land; (3) as a natural result, to encourage the founding of small self-supplying village communities, where local industries and handicrafts shall be pursued on sound and just lines.

A provisional committee has now been constituted to carry out these aims. * * *

The following are the guiding principles of the [proposed] scheme:

Healing and restoration after certain types of disablement is a slow and tedious process, demanding patience and faith. The training for a new trade or profession or for some modification of the old is also a slow process. It seems, therefore, a matter of common sense and humanity to carry on the two together and to provide for each man who needs it a system of curative treatment, combined with manual or mental training, such as will cure his disabilities, develop his natural gifts, and equip him to become, as far as possible and at the earliest possible date, a self-supporting citizen.

The committee desire that a large number of disabled and delicate men may be trained for rural life and village crafts, believing that in a congenial rural life lies the cure for their physical and mental ills. They must be attracted to the training center not only by the hope of physical or mental cure, but by the prospect of some degree of home life, self-government, and self-development. The committee discard the idea of military discipline and propose that the men shall form a committee among themselves to cooperate in the management of the place and help to evolve the necessary rules and regulations. Not only will curative treatment and training be given, but the social and industrial aspects of the settlement will be studied and some system for the fair production and distribution of goods thought out and applied.

The village settlement will serve two purposes. It will be a healing and training center, from which many hundreds of disabled men will pass every year restored to health and vigor and ready to contribute to the coming colonization of the home country or to practice the craft or art for which they will have been newly trained. It should also naturally become the nucleus of something more lasting, for it is proposed that little by little selected men shall settle with their families on the particular estate, there forming the basis of a permanent village settlement, with its own life and industries, institutions, and interests.

Some of the details of the scheme may be given.

Site and size of the settlement.—From the medical point of view it is essential that all the circumstances and surroundings of the settlement, such as situation and climate, shall favor health. Town areas are therefore undesirable, as also flat or damp country. For the best results surroundings of natural beauty and tranquility are necessary. If it proves most desirable to settle near an existing town these features must still be secured. In any case fertility of soil and convenience of transport must be regarded, together with ready opportunity for public service of water, electricity, and the like.

The committee strongly wish, if possible, to begin with an area of 1 square mile (640 acres), suitable for a training center of, say, 1,000 disabled men at a time, that being an economical medical unit. Of these, perhaps two-thirds will study agriculture and allied subjects, the rest handicrafts and business subjects. A certain proportion as they pass through will become desirous of settling permanently on the land or in villages with their families, and ultimately it is hoped that about 200 ex-service men may make their homes on the estate.

Types of disablement suitable to the scheme.—The types of case most likely to benefit by such a scheme of combined treatment and training are: (1) A large number of men suffering from shell shock, neurasthenia, and depression, for whom the encouraging and homelike influences of such a settlement are more suited than institutional treatment; (2) men crippled by wounds or by stiff or wasted joints or muscles; (3) men who have suffered amputation; (4) certain cases recovering from malaria or other

fevers and delicate men for whom a country life is prescribed. Incurable cases—that is to say, men who can not reasonably be expected to recover any real capacity for work—will not be received, nor those who still require surgical aid or residence in hospitals. The cases to be selected for the settlement will belong to the category of outpatients. Much importance is attached to the mixture of all kinds of curable disability and disablement. The patients will not be arranged in groups according to the form of disability from which they suffer, e. g., (1) mental shock, (2) neurasthenia, (3) paralysis, (4) amputation, (5) wounded limbs, and so on, but will live, work, and be treated together, the more severe with the slighter cases. In this way the intensive effects of gathering together numbers of men suffering from a particular form of abnormality may be avoided. The committee have the support of eminent authority in believing that aggregation of many cases of the same malady may prove as injurious in mental and nervous disorders as in infective illnesses.

Principles of employment.—The three main considerations are: (1) Medical, (2) the man's natural tastes and abilities, (3) the likelihood of financial success. Upon arrival each man should go before a committee consisting of experts in (1) orthopedics, neurasthenia, and general medicine, (2) education, (3) technical education, (4) industry and employment, who should give him their best advice upon the selection of an occupation. Each case must be considered upon its own merits, so that as far as possible some work may be found for every man which will aid his physical cure, soothe and occupy his mind, and bring out his latent talents, and provide a safe investment for the future. The medical man in charge will take periodical measurements and records of the patient's muscular power and movement, fatigability, and general progress.

The present sincere desire for industrial reform, widely and deeply felt, suggests that some experiments in this direction might be tried which would be of value in the future. The conditions for such experiments are good, as the men are not able-bodied, and therefore at first business principles are not strictly applicable, although economic soundness must be an aim and should be a natural result.

Factories will doubtless remain in certain industries. But there is a growing reaction against the universal recourse to the factory system, with its specialization of labor, speeding up, and lack of personal relationships. There is in many quarters a desire to return to a modified form of the old craft guilds, in which a man may learn to create articles for use of a high standard and himself become a master craftsman, not wholly spending his life in performing some mechanical and deadening process. The workshops of the proposed settlement must aim at high conditions of work, whereby articles are well and heartily made, and to attain this it seems desirable that the producers shall have some share and interest in the things which they have produced, associated, as far as possible, in self-governing workshops.

Administration.—One of the most important features of the scheme is the home life within it. It is believed that many men, if they could have their wives and children living with them, would happily settle down to a prolonged period of training, extending over months or even years. The suggestion, therefore, is that cottages should be provided as homes for these families. Any patient during his course would be free to apply to the committee for the use of a cottage for himself and his family, and it might well be that the privilege of occupying one of these could be dependent upon good work and good conduct, as well as upon suitability. Some of the families would only be there for a time; others would stay permanently and form the nucleus of a new village. In either case the presence of home life within the training center would be a strength to it in many ways.

It is proposed that compulsory and harassing regulations should be absent from the settlement and that the men themselves should be represented in its administration and direction.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD AND COAL IN THE UNITED STATES.

According to reports received from retail dealers by the Bureau of Labor Statistics, retail prices of food for the United States for January 15, 1918, show an increase of 2 per cent as compared with December 15, 1917.

Relative prices are shown for 16 articles only in this report. The year 1913 is used as the basis for comparison. No prices were secured by the bureau at that time for the following articles: Chuck roast, plate beef, salmon, cheese, rice, onions, beans, prunes, raisins, coffee, and tea. Average prices of these articles are shown for December, 1917, and for January of each year from 1914 to 1918, inclusive.

Four of the 16 articles show a decrease in price, flour of 2 per cent, lard, bacon, and corn meal of 1 per cent, each. Hens show the greatest increase, or 8 per cent. Eggs and potatoes increased 6 per cent each; butter 4 per cent; and milk 3 per cent. Sirloin steak, round steak, and rib roast show an increase of 2 per cent. Pork chops, ham, and sugar increased 1 per cent each. The price of bread remained the same.

The following table shows the course of prices in the United States in December, 1917, and January, 1918:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON DEC. 15, 1917, AND JAN. 15, 1918.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913.]

Article.	Unit.	Average money price.		Relative price.	
		Dec. 15, 1917.	Jan. 15, 1918.	Dec. 15, 1917.	Jan. 15, 1918.
Sirloin steak	Pound	$0.320	$0.327	126	129
Round steak	do	.300	.306	134	137
Rib roast	do	.253	.258	128	130
Chuck roast	do	.215	.221		
Plate beef	do	.164	.172		
Pork chops	do	.338	.343	161	163
Bacon	do	.487	.486	181	180
Ham	do	.435	.436	161	162
Lard	do	.333	.329	211	208
Hens	do	.304	.329	143	154
Salmon, canned	do	.290	.292		
Eggs	Dozen	.634	.674	184	195
Butter	Pound	.543	.567	142	148
Cheese	do	.345	.345		
Milk	Quart	.131	.134	147	151
Bread	16-ounce loaf.[1]	.083	.083	166	166
Flour	Pound	.067	.066	205	200
Corn meal	do	.071	.070	235	233
Rice	do	.116	.117		
Potatoes	do	.031	.032	178	188
Onions	do	.050	.050		
Beans, navy	do	.188	.185		
Prunes	do	.164	.164		
Raisins, seeded	do	.150	.150		
Sugar	do	.094	.095	172	173
Coffee	do	.303	.304		
Tea	do	.621	.623		
All articles combined				157	160

[1] 16 ounces, weight of dough.

In the year from January 15, 1917, to January 15, 1918, the price of food as a whole increased 25 per cent. All articles show decided increases, with the exception of potatoes, which decreased 16 per cent. Corn meal shows the greatest price change, an increase of 77 per cent. Bacon increased 64 per cent, lard 53 per cent, pork chops 44 per cent, ham 42 per cent, milk 35 per cent, hens 29 per cent, butter 25 per cent, eggs 23 per cent, bread 19 per cent, sugar 18 per cent, and flour 17 per cent.

A comparison of prices as between January, 1913, and January, 1918, shows that corn meal increased 135 per cent, lard 114 per cent, potatoes 107 per cent, flour 100 per cent, bacon 91 per cent, pork chops 83 per cent, eggs 81 per cent, bread 66 per cent, sugar 63 per cent, hens 62 per cent, and milk 51 per cent. Food as a whole advanced 63 per cent.

January, 1915, only, shows a decrease in the price of food as a whole in comparison with the same month in a preceding year.

A table showing the average and relative retail prices of food in the United States on January 15 of each year, 1913 to 1918, inclusive, follows:

AVERAGE MONEY PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JANUARY 15 OF EACH YEAR, 1913 TO 1918, INCLUSIVE.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913.]

Article.	Unit.	Average money price, Jan. 15—						Relative price, Jan. 15—					
		1913	1914	1915	1916	1917	1918	1913	1914	1915	1916	1917	1918
Sirloin steak	Lb.	$0.238	$0.251	$0.254	$0.257	$0.276	$0.327	94	99	100	101	109	129
Round steak	do.	.206	.228	.228	.228	.247	.306	92	102	102	102	111	137
Rib roast	do.	.187	.197	.199	.199	.216	.258	95	100	101	101	109	130
Chuck roast	do.	.....	.169	.163	.162	.174	.221	.....	.....	.....	.....	.....	.....
Plate beef	do.	.....	.123	.124	.120	.132	.172	.....	.....	.....	.....	.....	.....
Pork chops	do.	.186	.207	.186	.186	.236	.343	89	99	88	89	113	163
Bacon	do.	.255	.264	.273	.273	.296	.486	94	98	101	101	110	180
Ham	do.	.253	.265	.265	.294	.306	.436	93	98	98	109	114	162
Lard	do.	.154	.158	.154	.175	.214	.329	97	100	97	111	136	208
Hens	do.	.203	.212	.203	.217	.255	.329	95	100	95	101	119	154
Salmon, canned	do.	.....	.....	.198	.200	.214	.292	.....	.....	.....	.....	.....	.....
Eggs	Doz.	.371	.435	.443	.424	.544	.674	108	126	129	123	158	195
Butter	Lb.	.410	.398	.386	.382	.453	.567	107	104	101	100	118	148
Cheese	do.	.....	.....	.232	.243	.312	.345	.....	.....	.....	.....	.....	.....
Milk	Qt.	.089	.091	.090	.089	.099	.134	100	102	101	100	112	151
Bread	16-oz.[1]	.050	.055	.060	.062	.070	.083	100	110	120	124	140	166
Flour	Lb.	.033	.032	.040	.039	.056	.066	100	98	124	120	171	200
Corn meal	do.	.030	.031	.033	.032	.040	.070	99	104	109	107	132	233
Rice	do.	.....	.....	.091	.091	.091	.117	.....	.....	.....	.....	.....	.....
Potatoes	do.	.016	.019	.015	.024	.039	.032	91	108	85	136	225	188
Onions	do.	.....	.....	.034	.041	.069	.050	.....	.....	.....	.....	.....	.....
Beans, navy	do.	.....	.....	.073	.091	.145	.185	.....	.....	.....	.....	.....	.....
Prunes	do.	.....	.....	.137	.133	.139	.164	.....	.....	.....	.....	.....	.....
Raisins, seeded	do.	.....	.....	.125	.126	.141	.150	.....	.....	.....	.....	.....	.....
Sugar	do.	.058	.052	.060	.067	.080	.095	106	95	110	123	146	173
Coffee	do.	.....	.....	.299	.299	.299	.304	.....	.....	.....	.....	.....	.....
Tea	do.	.....	.....	.546	.546	.546	.623	.....	.....	.....	.....	.....	.....
All articles combined		.....	.....	.....	.....	.....	.....	**98**	**104**	**103**	**107**	**128**	**160**

[1] Loaf; 16 ounces, weight of dough.

The two tables which follow give average retail prices for 29 articles in 44 cities.

For 15 cities, average prices are shown for December 15, 1917, and for January 15, 1913, 1914, 1917, and 1918. Prices are not shown for Atlanta Ga., as less than 80 per cent of the meat and grocery firms of that city sent in their reports to the bureau.

For 29 cities, average prices are given for January 15, 1918.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR JAN. 15, 1913, 1914, 1917, AND 1918, AND DEC. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.					Boston, Mass.					Buffalo, N. Y.				
		January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—
		1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918
Sirloin steak	Lb.	.....	.....	.....	.....	.....	$0.207	$0.228	$0.252	$0.319	$0.327	$0.352	$0.325	$0.360	$0.427	$0.426	$0.203	$0.215	$0.253	$0.310	$0.314
Round steak	..do...	(1)	(1)	(1)	(1)	(1)	.190	.216	.242	.310	.315	.320	.338	.364	.427	.427	.183	.192	.227	.290	.292
Rib roast	..do...	(1)	(1)	(1)	(1)	(1)	.170	.178	.200	.262	.267	.234	.237	.265	.309	.303	.170	.168	.193	.243	.250
Chuck roast	..do...	(1)	(1)	(1)	(1)	(1)	.150	.152	.166	.227	.231	.163	.173	.197	.253	.253	.147	.155	.170	.219	.223
Plate beef	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.140	.181	.183	.....	.....	.....	.....	.....	.....	.....	.135	.171	.175
Pork chops	..do...	(1)	(1)	(1)	(1)	(1)	.180	.175	.214	.336	.348	.200	.228	.249	.349	.350	.180	.195	.200	.349	.354
Bacon, sliced	..do...	(1)	(1)	(1)	(1)	(1)	.213	.223	.263	.458	.450	.244	.250	.274	.453	.459	.203	.210	.163	.457	.443
Ham, sliced	..do...	(1)	(1)	(1)	(1)	(1)	.290	.290	.335	.477	.491	.283	.314	.345	.453	.465	.240	.250	.327	.432	.451
Lard	..do...	(1)	(1)	(1)	(1)	(1)	.140	.147	.203	.330	.332	.154	.158	.217	.341	.334	.141	.143	.195	.328	.319
Lamb	..do...	(1)	(1)	(1)	(1)	(1)	.173	.180	.270	.324	.327	.213	.212	.276	.335	.334	.175	.167	.223	.280	.291
Hens	..do...	(1)	(1)	(1)	(1)	(1)	.200	.213	.248	.310	.351	.220	.245	.283	.335	.349	.190	.200	.258	.307	.328
Salmon, canned	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.175	.254	.262	.....	.....	.205	.302	.302	.....	.....	.185	.283	.286
Eggs, strictly fresh	Doz...	(1)	(1)	(1)	(1)	(1)	.338	.388	.548	.620	.741	.410	.473	.629	.775	.791	.377	.435	.588	.650	.718
Eggs, storage	..do...	(1)	(1)	(1)	(1)	(1)	.250	.340	.435	.446	.541	.264	.363	.437	.480	.541	.233	.340	.417	.426	.526
Butter	Lb...	(1)	(1)	(1)	(1)	(1)	.428	.406	.481	.568	.591	.385	.382	.446	.520	.544	.402	.398	.443	.536	.570
Cheese	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.323	.351	.355	.....	.....	.290	.328	.332	.....	.....	.300	.336	.336
Milk	Qt...	(1)	(1)	(1)	(1)	(1)	.088	.087	.092	.128	.130	.089	.089	.100	.140	.145	.080	.080	.100	.138	.140
Bread	16-oz.[2]	(1)	(1)	(1)	(1)	(1)	.048	.049	.064	.076	.075	.052	.052	.069	.076	.078	.050	.046	.071	.077	.083
Flour	Lb...	(1)	(1)	(1)	(1)	(1)	.032	.031	.055	.066	.066	.037	.036	.062	.075	.074	.029	.029	.053	.061	.062
Corn meal	..do...	(1)	(1)	(1)	(1)	(1)	.026	.025	.033	.061	.061	.035	.036	.044	.079	.077	.025	.027	.041	.075	.077
Rice	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.098	.116	.115	.....	.....	.098	.120	.120	.....	.....	.093	.115	.119
Potatoes	..do...	(1)	(1)	(1)	(1)	(1)	.017	.018	.041	.030	.036	.017	.020	.040	.035	.037	.014	.018	.040	.031	.031
Onions	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.075	.054	.051	.....	.....	.076	.058	.057	.....	.....	.070	.054	.054
Beans, navy	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.145	.187	.186	.....	.....	.148	.189	.188	.....	.....	.136	.193	.193
Prunes	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.130	.175	.166	.....	.....	.143	.172	.267	.....	.....	.132	.167	.169
Raisins	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.120	.151	.153	.....	.....	.140	.151	.148	.....	.....	.122	.141	.140
Sugar	..do...	(1)	(1)	(1)	(1)	(1)	.051	.047	.075	.095	.094	.058	.052	.078	.101	.099	.055	.051	.077	.097	.097
Coffee	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.235	.286	.277	.....	.....	.334	.334	.346	.....	.....	.285	.295	.300
Tea	..do...	(1)	(1)	(1)	(1)	(1)	.....	.....	.550	.653	.653	.....	.....	.600	.637	.617	.....	.....	.475	.542	.555

Article.	Unit.	Chicago, Ill.					Cleveland, Ohio.				
		January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—
		1913	1914	1917	1917	1918	1913	1914	1917	1917	1918
Sirloin steak	Lb.	$0.210	$0.248	$0.265	$0.292	$0.302	$0.223	$0.247	$0.270	$0.297	$0.302
Round steak	do	.182	.212	.227	.260	.273	.188	.220	.242	.278	.288
Rib roast	do	.182	.196	.223	.242	.254	.178	.191	.212	.238	.244
Chuck roast	do	.143	.158	.167	.205	.212	.147	.164	.180	.217	.224
Plate beef	do			.130	.159	.164			.127	.163	.168
Pork chops	do	.160	.179	.227	.298	.316	.175	.199	.255	.323	.331
Bacon, sliced	do	.313	.310	.316	.492	.498	.239	.274	.301	.467	.470
Ham, sliced	do	.308	.320	.333	.429	.428	.320	.335	.350	.444	.456
Lard	do	.148	.150	.203	.319	.318	.158	.163	.224	.330	.316
Lamb	do	.187	.197	.232	.286	.306	.173	.191	.270	.290	.301
Hens	do	.174	.178	.237	.265	.304	.193	.206	.280	.308	.338
Salmon, canned	do			.231	.295	.303			.197	.279	.282
Eggs, strictly fresh	Doz.	.327	.388	.525	.588	.651	.350	.448	.619	.660	.725
Eggs, storage	do	.238	.335	.449	.438	.534	.245	.360	.463	.443	.524
Butter	Lb.	.399	.381	.438	.530	.544	.418	.428	.487	.564	.571
Cheese	do			.321	.366	.375			.317	.346	.338
Milk	Qt.	.080	.080	.090	.119	.119	.088	.080	.100	.120	.130
Bread	16-oz.[2]	.054	.054	.072	.080	.080	.049	.050	.070	.078	.079
Flour	Lb.	.028	.029	.051	.061	.061	.032	.032	.058	.068	.068
Corn meal	do	.029	.030	.042	.069	.070	.028	.029	.041	.076	.072
Rice	do			.094	.115	.120			.092	.124	.119
Potatoes	do	.013	.017	.040	.026	.028	.014	.020	.042	.030	.030
Onions	do			.068	.044	.045			.071	.051	.048
Beans, navy	do			.148	.189	.185			.153	.194	.181
Prunes	do			.140	.160	.162			.138	.176	.171
Raisins	do			.147	.148	.150			.139	.146	.146
Sugar	do	.053	.050	.073	.084	.084	.056	.051	.080	.094	.096
Coffee	do			.300	.283	.283			.288	.291	.289
Tea	do			.543	.593	.593			.475	.622	.599

Article.	Denver, Colo.					Detroit, Mich.				
	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—
	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918
Sirloin steak	$0.220	$0.229	$0.225	$0.283	$0.292	$0.228	$0.262	$0.252	$0.296	$0.318
Round steak	.190	.207	.188	.262	.276	.180	.214	.228	.268	.285
Rib roast	.159	.174	.180	.223	.225	.180	.202	.213	.237	.251
Chuck roast	.140	.153	.161	.197	.203	.145	.156	.165	.193	.210
Plate beef			.101	.139	.148			.128	.154	.167
Pork chops	.175	.186	.218	.339	.333	.165	.176	.218	.318	.333
Bacon, sliced	.263	.274	.317	.536	.518	.210	.228	.253	.456	.458
Ham, sliced	.270	.283	.333	.467	.467	.235	.280	.300	.430	.423
Lard	.156	.163	.216	.345	.342	.156	.161	.208	.336	.329
Lamb	.150	.151	.193	.286	.289	.160	.166	.225	.290	.313
Hens	.204	.197	.215	.281	.305	.188	.194	.263	.298	.342
Salmon, canned			.181	.275	.276			.195	.292	.286
Eggs, strictly fresh	.370	.436	.525	.564	.612	.350	.432	.583	.634	.726
Eggs, storage	.250	.335	.400	.438	.509	.252	.365	.443	.436	.528
Butter	.400	.393	.438	.533	.543	.397	.399	.443	.539	.556
Cheese			.325	.359	.358			.305	.339	.338
Milk	.084	.084	.083	.120	.115	.090	.089	.110	.140	.140
Bread	.048	.048	.075	.086	.086	.050	.050	.070	.075	.077
Flour	.026	.025	.049	.055	.054	.023	.031	.054	.064	.062
Corn meal	.025	.026	.032	.061	.059	.028	.030	.040	.084	.077
Rice			.092	.114	.115			.086	.117	.118
Potatoes	.012	.017	.032	.025	.022	.013	.016	.041	.027	.029
Onions			.056	.049	.047			.065	.053	.053
Beans, navy			.124	.184	.177			.144	.185	.179
Prunes			.138	.170	.166			.129	.160	.168
Raisins			.131	.142	.147			.128	.139	.138
Sugar	.058	.050	.079	.088	.089	.052	.050	.074	.086	.087
Coffee			.288	.295	.300			.275	.293	.298
Tea			.488	.576	.575			.450	.549	.544

[1] Prices not shown, less than 80 per cent of reports for January, 1918, received by bureau.

[2] Loaf: 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR JAN. 15, 1913, 1914, 1917, AND 1918, AND DEC. 15, 1917—Concluded.

Article.	Unit.	Milwaukee, Wis.					New York, N. Y.					Philadelphia, Pa.					Pittsburgh, Pa.				
		January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—
		1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918
Sirloin steak	Lb.	$0.205	$0.234	$0.251	$0.287	$0.298	$0.244	$0.256	$0.284	$0.335	$0.344	$0.283	$0.300	$0.328	$0.382	$0.387	$0.248	$0.272	$0.290	$0.344	$0.360
Round steak	do	.185	.216	.260	.275	.284	.231	.251	.275	.312	.352	.231	.257	.286	.370	.360	.214	.228	.259	.318	.332
Rib roast	do	.173	.188	.200	.233	.245	.210	.218	.238	.285	.294	.214	.219	.238	.288	.296	.204	.213	.233	.265	.272
Chuck roast	do	.150	.164	.174	.216	.225	.149	.161	.173	.222	.236	.165	.180	.197	.249	.253	.154	.170	.189	.232	.239
Plate beef	do	.....	.....	.128	.158	.167	.....	.....	.161	.218	.221	.....	.....	.131	.176	.183	.....	.....	.129	.169	.175
Pork chops	do	.153	.178	.226	.301	.321	.195	.216	.248	.345	.348	.198	.217	.255	.354	.372	.194	.215	.247	.348	.356
Bacon, sliced	do	.255	.274	.305	.488	.489	.230	.251	.272	.461	.462	.236	.254	.301	.466	.468	.272	.283	.308	.502	.505
Ham, sliced	do	.260	.278	.309	.441	.451	[1] .181	[1] .197	[1] .229	[1] .325	[1] .469	.291	.296	.363	.486	.488	.290	.291	.350	.461	.470
Lard	do	.150	.156	.216	.331	.319	.159	.159	.213	.337	.330	.144	.151	.211	.338	.336	.156	.156	.213	.341	.334
Lamb	do	.185	.190	.245	.296	.312	.159	.159	.217	.277	.281	.177	.190	.251	.306	.314	.213	.207	.271	.344	.345
Hens	do	.178	.190	.245	.259	.304	.198	.213	.261	.307	.326	.208	.229	.277	.323	.338	.243	.258	.300	.357	.388
Salmon, canned	do	.....	.....	.219	.274	.278	.....	.....	.253	.346	.355	.....	.....	.175	.261	.266	.....	.....	.213	.311	.305
Eggs, strictly fresh	Doz.	.346	.382	.528	.579	.630	.426	.499	.667	.731	.808	.384	.440	.623	.663	.741	.376	.431	.593	.644	.747
Eggs, storage	do	.253	.333	.426	.416	.491	.274	.377	.455	.471	.536	.252	.347	.446	.449	.529	.250	.361	.438	.451	.539
Butter	Lb.	.380	.385	.448	.531	.544	.408	.398	.460	.548	.574	.464	.461	.511	.593	.624	.419	.423	.473	.569	.586
Cheese	do	.....	.....	.313	.338	.335	.....	.....	.301	.346	.344	.....	.....	.318	.370	.362	.....	.....	.313	.349	.352
Milk	Qt.	.070	.070	.080	.110	.110	.090	.090	.100	.140	.150	.080	.080	.090	.122	.135	.088	.092	.103	.127	.137
Bread	16-oz.[2]	.050	.051	.076	.086	.075	.053	.054	.071	.078	.078	.043	.043	.057	.076	.071	.047	.049	.068	.081	.082
Flour	Lb.	.031	.031	.056	.062	.062	.033	.032	.056	.076	.070	.032	.031	.056	.073	.071	.030	.031	.056	.070	.070
Corn meal	do	.033	.033	.047	.076	.071	.035	.035	.051	.085	.082	.028	.028	.038	.071	.071	.027	.029	.043	.090	.088
Rice	do	.....	.....	.095	.116	.118	.....	.....	.091	.117	.118	.....	.....	.097	.123	.128	.....	.....	.095	.121	.119
Potatoes	do	.012	.016	.041	.027	.027	.025	.025	.048	.038	.043	.021	.024	.046	.036	.039	.015	.019	.044	.031	.033
Onions	do	.....	.....	.072	.048	.048	.....	.....	.072	.058	.052	.....	.....	.077	.056	.055	.....	.....	.085	.049	.051
Beans, navy	do	.....	.....	.147	.194	.190	.....	.....	.149	.186	.185	.....	.....	.143	.187	.187	.....	.....	.150	.200	.197
Prunes	do	.....	.....	.150	.159	.158	.....	.....	.139	.174	.168	.....	.....	.141	.166	.165	.....	.....	.139	.172	.172
Raisins	do	.....	.....	.142	.148	.151	.....	.....	.135	.151	.151	.....	.....	.129	.135	.140	.....	.....	.147	.148	.146
Sugar	do	.055	.053	.077	.087	.086	.051	.047	.074	.099	.097	.052	.044	.076	.097	.096	.060	.054	.086	.097	.099
Coffee	do	.....	.....	.283	.265	.261	.....	.....	.265	.275	.267	.....	.....	.283	.279	.272	.....	.....	.281	.297	.302
Tea	do	.....	.....	.540	.586	.595	.....	.....	.460	.515	.541	.....	.....	.544	.571	.576	.....	.....	.571	.720	.727

Article.	Unit.	St. Louis, Mo.					San Francisco, Cal.					Seattle, Wash.					Washington, D. C.				
		January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—	January 15—			Dec. 15—	Jan. 15—
		1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918	1913	1914	1917	1917	1918
Sirloin steak	Lb.	$0.227	$0.273	$0.259	$0.299	$0.300	$0.203	$0.210	$0.214	$0.238	$0.243	$0.220	$0.240	$0.232	$0.267	$0.275	$0.250	$0.275	$0.292	$0.363	$0.370
Round steak	do	.193	.243	.246	.289	.296	.187	.197	.200	.236	.237	.200	.212	.212	.253	.256	.214	.234	.250	.345	.351
Rib roast	do	.168	.205	.213	.252	.257	.203	.220	.213	.227	.235	.180	.194	.200	.220	.228	.203	.210	.218	.285	.288
Chuck roast	do	.133	.159	.166	.204	.215	.150	.155	.148	.168	.173	.152	.149	.151	.183	.195	.156	.170	.188	.249	.254
Plate beef	do	.....	.....	.129	.168	.172	.....	.....	.142	.163	.166	.....	.....	.117	.155	.162	.....	.....	.144	.185	.195
Pork chops	do	.177	.185	.223	.291	.303	.218	.250	.246	.362	.361	.234	.240	.244	.383	.388	.203	.203	.242	.370	.381
Bacon, sliced	do	.230	.250	.275	.477	.500	.328	.340	.367	.532	.535	.300	.321	.317	.524	.534	.230	.245	.272	.496	.488
Ham, sliced	do	.250	.300	.300	.451	.457	.300	.320	.400	.486	.489	.283	.300	.310	.443	.464	.282	.286	.325	.468	.472
Lard	do	.131	.130	.187	.296	.286	.176	.174	.225	.334	.336	.178	.170	.211	.320	.327	.142	.149	.198	.335	.336
Lamb	do	.177	.171	.247	.294	.306	.172	.180	.218	.281	.282	.186	.187	.212	.301	.315	.193	.197	.250	.351	.357
Hens	do	.178	.175	.227	.265	.301	.242	.238	.283	.349	.375	.243	.250	.255	.294	.341	.206	.224	.253	.329	.350
Salmon, canned	do	.....	.....	.191	.287	.285	.....	.....	.196	.252	.257	.....	.....	.196	.288	.285	.....	.....	.180	.285	.283
Eggs, strictly fresh	Doz.	.293	.383	.483	.584	.684	.314	.479	.480	.596	.710	.390	.425	.453	.605	.595	.331	.410	.613	.679	.813
Eggs, storage	do	.250	.300	.417	.428	.525	.225	.413	.350	.441	.488	.325	.375	.373	.484	.475	.250	.357	.425	.462	.584
Butter	Lb.	.407	.398	.459	.559	.581	.414	.361	.425	.538	.602	.446	.409	.447	.549	.587	.434	.430	.478	.570	.600
Cheese	do	.....	.....	.309	.351	.352	.....	.....	.242	.329	.335	.....	.....	.275	.305	.306	.....	.....	.306	.356	.355
Milk	Qt.	.080	.088	.095	.130	.130	.100	.100	.100	.121	.121	.091	.096	.098	.125	.126	.090	.090	.100	.140	.140
Bread	16-oz.[2]	.050	.050	.072	.088	.088	.052	.052	.060	.085	.085	.053	.051	.077	.087	.087	.051	.050	.069	.075	.076
Flour	Lb.	.031	.028	.052	.061	.061	.033	.034	.051	.062	.062	.028	.029	.047	.058	.059	.038	.037	.053	.072	.070
Corn meal	do	.023	.026	.035	.062	.059	.034	.034	.044	.070	.071	.031	.034	.041	.075	.073	.026	.025	.030	.069	.066
Rice	do	.....	.....	.086	.111	.112	.....	.....	.088	.112	.119	.....	.....	.085	.108	.108	.....	.....	.097	.123	.125
Potatoes	do	.017	.016	.039	.030	.030	.016	.019	.032	.029	.027	.010	.014	.026	.020	.019	.016	.020	.040	.033	.035
Onions	do	.....	.....	.085	.045	.046	.....	.....	.076	.030	.033	.....	.....	.076	.042	.041	.....	.....	.062	.048	.051
Beans, navy	do	.....	.....	.143	.183	.179	.....	.....	.141	.163	.162	.....	.....	.146	.183	.177	.....	.....	.149	.199	.200
Prunes	do	.....	.....	.138	.166	.167	.....	.....	.124	.139	.142	.....	.....	.130	.145	.143	.....	.....	.146	.175	.174
Raisins	do	.....	.....	.146	.167	.165	.....	.....	.135	.137	.138	.....	.....	.131	.145	.149	.....	.....	.137	.149	.152
Sugar	do	.058	.047	.075	.086	.087	.057	.053	.074	.081	.086	.061	.058	.079	.088	.089	.055	.049	.075	.097	.096
Coffee	do	.....	.....	.237	.280	.274	.....	.....	.317	.361	.309	.....	.....	.320	.310	.318	.....	.....	.294	.285	.296
Tea	do	.....	.....	.543	.636	.650	.....	.....	.517	.539	.539	.....	.....	.500	.548	.561	.....	.....	.532	.612	.639

[1] Whole ham.

[2] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON JAN. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Average retail prices, Jan. 15, 1918.									
		Birmingham, Ala.	Bridgeport, Conn.	Butte, Mont.	Charleston, S. C.	Cincinnati, Ohio.	Columbus, Ohio.	Dallas, Tex.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.
Sirloin steak	Lb.	$0.350	$0.410	$0.305	$0.311	$0.283	$0.320	$0.328	$0.425	$0.313	$0.333
Round steak	do.	.305	.381	.277	.301	.270	.294	.315	.364	.307	.300
Rib roast	do.	.263	.313	.255	.262	.239	.251	.277	.276	.230	.254
Chuck roast	do.	.219	.275	.202	.203	.203	.222	.247	.233	.215	.203
Plate beef	do.	.171	.170	.145	.181	.173	.176	.191	.....	.167	.165
Pork chops	do.	.335	.338	.369	.358	.311	.322	.355	.340	.336	.348
Bacon, sliced	do.	.520	.506	.565	.508	.462	.476	.530	.453	.478	.500
Ham, sliced	do.	.450	.498	.475	.461	.435	.447	.463	.440	.440	.431
Lard	do.	.327	.328	.337	.340	.291	.327	.324	.316	.319	.343
Lamb	do.	.350	.302	.315	.336	.288	.315	.367	.310	.250	.307
Hens	do.	.301	.349	.347	.353	.333	.323	.276	.348	.275	.324
Salmon, canned	do.	.272	.353	.375	.268	.260	.272	.288	.301	.241	.285
Eggs, strictly fresh	Doz.	.683	.823	.730	.633	.710	.695	.656	.803	.701	.650
Eggs, storage	do.	.579	.542	.520	.521	.544	.523	.565	.518	.533	.543
Butter	Lb.	.595	.520	.592	.561	.516	.564	.551	.512	.574	.592
Cheese	do.	.356	.345	.358	.343	.360	.336	.359	.329	.375	.346
Milk	Qt.	.152	.150	.150	.155	.130	.123	.163	.128	.107	.180
Bread	16-oz.[1]	.089	.083	.106	.092	.080	.090	.078	.088	.073	.088
Flour	Lb.	.067	.071	.072	.077	.070	.066	.065	.075	.067	.072
Corn meal	do.	.051	.084	.078	.064	.065	.061	.070	.091	.063	.063
Rice	do.	.125	.123	.125	.091	.117	.121	.116	.121	.124	.106
Potatoes	do.	.039	.037	.023	.039	.032	.030	.033	.036	.044	.044
Onions	do.	.060	.056	.049	.056	.053	.056	.055	.053	.048	.059
Beans, navy	do.	.192	.189	.177	.190	.177	.181	.179	.181	.190	.201
Prunes	do.	.148	.167	.169	.161	.160	.154	.182	.165	.170	.180
Raisins	do.	.153	.157	.150	.150	.152	.149	.159	.152	.178	.178
Sugar	do.	.096	.100	.101	.098	.094	.094	.095	.103	.092	.101
Coffee	do.	.328	.316	.421	.274	.265	.302	.365	.321	.294	.327
Tea	do.	.762	.623	.779	.611	.692	.778	.816	.507	.770	.735

Article.	Unit.	Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Cal.	Louisville, Ky.	Manchester, N. H.	Memphis, Tenn.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.	New Orleans, La.
Sirloin steak	Lb.	$0.321	$0.300	$0.264	$0.295	$0.437	$0.316	$0.252	$0.369	$0.410	$0.281
Round steak	do.	.292	.279	.244	.280	.398	.292	.241	.374	.376	.253
Rib roast	do.	.229	.256	.232	.231	.271	.252	.202	.300	.319	.245
Chuck roast	do.	.195	.201	.192	.208	.239	.210	.183	.264	.272	.183
Plate beef	do.	.163	.194	.157	.182	.200	.186	.140	.197	.....	.168
Pork chops	do.	.315	.338	.373	.318	.328	.335	.305	.355	.342	.350
Bacon, sliced	do.	.492	.519	.533	.495	.452	.496	.485	.445	.502	.519
Ham, sliced	do.	.464	.475	.523	.442	.421	.433	.435	.351	.506	.438
Lard	do.	.343	.341	.332	.313	.338	.319	.319	.336	.335	.331
Lamb	do.	.265	.296	.311	.325	.317	.303	.243	.333	.329	.298
Hens	do.	.276	.302	.360	.313	.357	.299	.282	.341	.352	.330
Salmon, canned	do.	.295	.294	.329	.242	.298	.304	.332	.342	.330	.313
Eggs, strictly fresh	Doz.	.587	.650	.621	.698	.725	.704	.601	.816	.813	.586
Eggs, storage	do.	.525	.617	.493	.559	.565	.559	.466	.548	.495	.492
Butter	Lb.	.549	.575	.574	.592	.565	.572	.518	.602	.523	.568
Cheese	do.	.352	.371	.333	.364	.337	.340	.317	.356	.338	.348
Milk	Qt.	.122	.150	.140	.127	.140	.150	.110	.150	.140	.142
Bread	16-oz.[1]	.087	.093	.075	.080	.076	.087	.077	.080	.081	.075
Flour	Lb.	.062	.066	.063	.067	.073	.069	.058	.073	.071	.072
Corn meal	do.	.062	.059	.075	.060	.080	.055	.056	.082	.082	.063
Rice	do.	.108	.118	.110	.119	.113	.105	.108	.119	.119	.106
Potatoes	do.	.031	.021	.025	.054	.035	.031	.024	.041	.036	.038
Onions	do.	.053	.053	.037	.048	.054	.050	.040	.061	.058	.047
Beans, navy	do.	.184	.180	.167	.188	.189	.192	.179	.186	.190	.176
Prunes	do.	.144	.171	.146	.169	.162	.160	.152	.173	.176	.159
Raisins	do.	.144	.150	.138	.150	.151	.153	.144	.148	.154	.151
Sugar	do.	.102	.094	.087	.091	.100	.099	.092	.099	.108	.096
Coffee	do.	.285	.310	.312	.266	.342	.302	.311	.299	.327	.266
Tea	do.	.620	.781	.586	.716	.581	.739	.500	.550	.571	.626

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON JAN. 15, 1918—Concluded.

Article.	Unit.	Average retail prices Jan. 15, 1918.								
		Omaha, Nebr.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	Rochester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Springfield, Ill.
Sirloin steak	Lb.	$0.305	$0.253	$0.514	$0.330	$0.308	$0.286	$0.273	$0.350	$0.327
Round steak	do.	.288	.240	.421	.305	.291	.249	.258	.314	.307
Rib roast	do.	.231	.229	.329	.258	.256	.238	.231	.275	.247
Chuck roast	do.	.205	.178	.300	.228	.237	.202	.198	.226	.230
Plate beef	do.	.159	.149	.....	.193	.179	.143	.157	.173	.187
Pork chops	do.	.307	.348	.360	.356	.347	.301	.352	.352	.327
Bacon, sliced	do.	.490	.518	.467	.478	.445	.481	.508	.516	.491
Ham, sliced	do.	.446	.465	.512	.413	.443	.454	.454	.446	.443
Lard	do.	.336	.344	.341	.342	.336	.317	.362	.327	.332
Lamb	do.	.268	.271	.338	.320	.312	.254	.272	.334	.319
Hens	do.	.277	.321	.364	.325	.348	.281	.339	.354	.266
Salmon, canned	do.	.284	.334	.289	.235	.292	.290	.320	.291	.279
Eggs, strictly fresh	Doz.	.622	.567	.815	.645	.765	.573	.600	.721	.608
Eggs, storage	do.	.507	.467	.519	.571	.492	.475	.487	.504	.568
Butter	Lb.	.535	.592	.555	.587	.546	.529	.550	.528	.589
Cheese	do.	.347	.304	.338	.357	.341	.338	.331	.322	.377
Milk	Qt.	.123	.126	.145	.140	.133	.110	.110	.140	.125
Bread	16 oz.[1]	.089	.078	.082	.089	.082	.088	.089	.085	.090
Flour	Lb.	.061	.058	.070	.071	.066	.061	.053	.072	.066
Corn meal	do.	.063	.071	.076	.062	.080	.065	.074	.....	.072
Rice	do.	.111	.116	.119	.121	.123	.114	.105	.121	.126
Potatoes	do.	.029	.020	.037	.025	.027	.026	.020	.032	.030
Onions	do.	.047	.038	.051	.059	.049	.041	.045	.064	.048
Beans, navy	do.	.176	.153	.187	.207	.194	.194	.180	.187	.205
Prunes	do.	.166	.138	.172	.154	.186	.164	.152	.169	.176
Raisins	do.	.165	.138	.145	.149	.151	.147	.144	.148	.175
Sugar	do.	.091	.090	.098	.100	.100	.095	.097	.100	.092
Coffee	do.	.311	.325	.339	.282	.299	.321	.342	.315	.300
Tea	do.	.604	.567	.571	.731	.530	.531	.622	.592	.669

[1] Loaf; 16 ounces, weight of dough.

Relative prices for three kinds of coal, Pennsylvania anthracite white ash coal, both in stove size and in chestnut size, and bituminous coal are given below.

The price of Pennsylvania anthracite stove coal increased 6 per cent, that of chestnut 5 per cent, while bituminous coal increased 9 per cent from January, 1917, to January, 1918.

RELATIVE RETAIL PRICES OF COAL IN TON LOTS FOR HOUSEHOLD USE, JAN. 15, 1907, TO JAN. 15, 1918.

[Average price for 1913=100.]

Date.	Pennsylvania anthracite white ash.		Bituminous.
	Stove.	Chestnut.	
Jan. 15—			
1907	90	89	97
1908	91	91	98
1909	91	91	94
1910	91	91	95
1911	91	91	98
1912	92	93	95
1913	100	100	100
1914	96	97	101
1915	97	98	97
1916	99	100	96
1917	116	116	123
1918	123	122	133

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

A comparison of wholesale and retail price changes among important food articles in recent months, made by the Bureau of Labor Statistics of the United States Department of Labor, shows that the rise has been more pronounced for wholesale than for retail prices. This accords with the well-established principle that wholesale prices are more sensitive and respond more quickly to change-producing influences than retail prices. In collecting data for the comparison it was found that in some instances slight differences of grade or quality existed between the articles for which wholesale prices were obtainable and those for which retail prices could be secured. It was found impracticable, also, in most instances to obtain both kinds of quotations for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in contrasting price variations in the retail with those in the wholesale markets.

In the table which follows the wholesale price is in each case the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question. The initials W. and R. are used to designate wholesale and retail prices, respectively.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917					1918
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Dec.	Jan.
Beef:											
Steer loin ends (hips), Chic..W.	Lb..	$0.168	$0.175	$0.160	$0.205	$0.200	$0.200	$0.190	$0.235	$0.235	$0.200
Sirloin steak, Chicago.....R.	Lb..	.232	.260	.258	.281	.265	.293	.302	.306	.292	.302
Beef:											
Steer rounds, No. 2, Chic....W.	Lb..	.131	.145	.143	.145	.120	.155	.170	.190	.170	.165
Round steak, Chicago.....R.	Lb..	.202	.233	.228	.241	.227	.256	.266	.273	.260	.273
Beef:											
Steer ribs, No. 2, Chicago....W.	Lb..	.157	.165	.145	.175	.160	.210	.200	.230	.200	.200
Rib roast, Chicago.....R.	Lb..	.195	.212	.213	.229	.223	.241	.246	.247	.242	.254
Beef:											
No. 2 loins, New York.....W.	Lb..	.158	.183	.170	.200	.180	.190	.190	.275	.220	.235
Sirloin steak, New York.....R.	Lb..	.259	.274	.282	.294	.284	.318	.337	.356	.335	.344
Beef:											
No. 2 rounds, New York....W.	Lb..	.121	.135	.135	.145	.130	.170	.175	.190	.180	.180
Round steak, New York.....R.	Lb..	.249	.270	.271	.289	.275	.315	.337	.360	.342	.352
Beef:											
No. 2 ribs, New York.....W.	Lb..	.151	.165	.160	.180	.160	.200	.190	.275	.225	.235
Rib roast, New York.....R.	Lb..	.218	.225	.227	.243	.238	.270	.279	.298	.285	.294
Pork:											
Loins, Chicago.....W.	Lb..	.149	.165	.150	.165	.165	.240	.250	.330	.245	.270
Chops, Chicago.....R.	Lb..	.190	.204	.201	.217	.227	.285	.292	.358	.298	.316
Pork:											
Loins, Western, New York..W.	Lb..	.152	.163	.153	.165	.170	.235	.235	.300	.270	.265
Chops, New York.....R.	Lb..	.217	.230	.217	.239	.248	.319	.326	.399	.345	.348

Library

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917					1918
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Dec.	Jan.
Bacon:											
Short clear sides, Chicago....W.	Lb..	$0.127	$0.139	$0.113	$0.159	$0.158	$0.218	$0.247	$0.318	$0.321	$0.301
Sliced, Chicago.....R.	Lb..	.294	.318	.315	.328	.316	.395	.439	.475	.492	.498
Ham:											
Smoked, Chicago.....W.	Lb..	.166	.175	.163	.190	.188	.243	.243	.283	.303	.298
Smoked, sliced, Chicago.....R.	Lb..	.266	.338	.328	.349	.333	.382	.414	.439	.429	.428
Lard:											
Prime contract, New York..W.	Lb..	.110	.104	.080	.133	.159	.215	.201	.246	.261	.246
Pure, tub, New York.....R.	Lb..	.160	.156	.151	.168	.213	.263	.274	.313	.337	.330
Lamb:											
Dressed, round, Chicago.....W.	Lb..	.140	.170	.190	.190	.200	.220	.260	.270	.240	.240
Leg of, yearling, Chicago.....R.	Lb..	.198	.219	.208	.231	.232	.263	.287	.314	.286	.306
Poultry:											
Dressed fowls, New York....W.	Lb..	.182	.188	.175	.215	.220	.265	.248	.285	.250	.298
Dressed hens, New York....R.	Lb..	.214	.220	.219	.256	.261	.293	.287	.323	.307	.326
Butter:											
Creamery, extra, Chicago....W.	Lb..	.310	.265	.265	.275	.370	.440	.375	.435	.475	.490
Creamery, extra, Chicago....R.	Lb..	.362	.312	.322	.335	.438	.484	.432	.487	.530	.544
Butter:											
Creamery, extra, New York.W.	Lb..	.323	.280	.270	.285	.395	.459	.395	.443	.493	.510
Creamery, extra, New York..R.	Lb..	.382	.328	.336	.346	.460	.513	.453	.515	.548	.574
Butter:											
Creamery, extra, San Fran..W.	Lb..	.317	.245	.265	.255	.355	.390	.385	.460	.450	.530
Creamery, extra, San Fran..R.	Lb..	.388	.329	.338	.333	.425	.452	.455	.545	.558	.602
Cheese:											
Whole milk, Chicago.....W.	Lb..	.142	.133	.145	.145	.218	.223	.216	.246	.221	.233
Full cream, Chicago.....R.	Lb..	.....	.....	.229	.242	.321	.327	.339	.368	.366	.375
Cheese:											
Whole milk, State, N. Y....W.	Lb..	.154	.144	.146	.151	.220	.245	.238	.255	.228	.230
Full cream, American, N. Y.R.	Lb..	.....	.....	.229	.228	.301	.335	.328	.340	.346	.344
Cheese:											
Fancy, San Francisco.....W.	Lb..	.159	.125	.115	.135	.180	.215	.200	.220	.230	.255
Full cream, San Francisco...R.	Lb..	.....	.....	.200	.229	.242	.297	.297	.316	.329	.335
Milk:											
Fresh, Chicago.....W.	Qt..	.038	.036	.037	.036	.045	.054	.047	.074	.070	.070
Fresh, bottled, Chicago.....R.	Qt..	.080	.080	.080	.081	.100	.100	.100	.129	.119	.119
Milk:											
Fresh, New York.....W.	Qt..	.035	.030	.030	.031	.051	.049	.050	.072	.072	.081
Fresh, bottled, New York...R.	Qt..	.090	.090	.090	.090	.100	.109	.114	.138	.140	.150
Milk:											
Fresh, San Francisco.....W.	Qt..	.039	.039	.038	.038	.038	.038	.043	.059	.059	.056
Fresh, bottled, San Fran....R.	Qt..	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121
Eggs:											
Fresh, firsts, Chicago.....W.	Doz.	.226	.188	.168	.218	.485	.305	.310	.370	.485	.565
Strictly fresh, Chicago.....R.	Doz.	.292	.261	.248	.296	.525	.376	.406	.469	.588	.651
Eggs:											
Fresh, firsts, New York.....W.	Doz.	.249	.215	.200	.241	.505	.330	.350	.400	.555	.645
Strictly fresh, New York....R.	Doz.	.397	.333	.326	.372	.667	.424	.477	.627	.731	.808
Eggs:											
Fresh, San Francisco.....W.	Doz.	.268	.230	.220	.240	.380	.280	.320	.435	.450	.610
Strictly fresh, San Francisco.R.	Doz.	.373	.338	.310	.333	.480	.374	.392	.608	.556	.710
Flour:											
Winter patent,[1] Kans. City.W.	Bbl.	4.012	3.550	6.225	4.750	8.950	11.450	11.150	10.500	10.000	10.100
Aristos, Kansas City.....R.	Bbl.	5.923	5.733	7.800	6.700	10.600	13.689	13.680	13.066	12.150	12.200
Flour:											
Standard patent,[1] Minn.....W.	Bbl.	4.584	4.500	7.025	6.050	9.450	11.025	12.060	10.550	10.150	10.075
Pillsbury's Best, Minn.....R.	Bbl.	5.600	5.800	8.200	7.000	10.800	13.200	13.424	11.984	11.500	11.368
Flour:											
Fancy patent,[1] St. Louis....W.	Bbl.	4.181	3.700	5.800	4.925	8.675	11.375	11.375	11.250	10.525	10.425
Gold Medal, St. Louis.....R.	Bbl.	6.077	6.000	8.187	6.933	10.587	12.853	13.200	13.100	12.300	11.733
Corn meal:											
Fine, yellow, New York....W.	Lb..	.014	.014	.017	.019	.027	.031	.040	.049	.048	.048
Fine, yellow, New York.....R.	Lb..	.034	.034	.035	.042	.051	.057	.070	.082	.085	.082
Beans:											
Medium, choice, N. Y.....W.	Lb..	.040	.040	.058	.098	.108	.130	.154	.138	.141	.141
Navy, white, New York.....R.	Lb..	.....	.....	.081	.113	.149	.162	.188	.185	.186	.185
Potatoes:											
White, good to choice, Chic..W.	Bu..	.614	1.450	.400	.975	1.750	2.800	2.625	1.135	1.080	1.185
White, Chicago.....R.	Bu..	.900	1.640	.700	1.856	2.370	3.455	2.975	1.660	1.562	1.680
Rice:											
Head, New Orleans.....W.	Lb..	.050	.054	.049	.046	.048	.049	.071	.077	.079	.088
Head, New Orleans.....R.	Lb..	.....	.....	.075	.074	.074	.088	.101	.100	.108	.106
Sugar:											
Granulated, New York.....W.	Lb..	.043	.042	.059	.075	.066	.081	.074	.082	.080	.073
Granulated, New York.....R.	Lb..	.049	.046	.063	.079	.074	.087	.084	.097	.099	.097

Beginning in January, 1918, War Standard flour.

Wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table which follows. A few articles included in the preceding table are omitted from this one, owing to lack of satisfactory data for 1913. It will be seen from the table that since the beginning of 1917 the retail prices of most of the commodities included in the exhibit have fluctuated at a lower percentage level, as compared with their 1913 base, than have the wholesale prices. This is particularly noticeable in the case of pork, bacon, lard, dressed lamb, butter, milk, eggs, flour, corn meal, and potatoes. For corn meal, especially, there has been a much smaller percentage of increase in the retail than in the wholesale price. Comparing January, 1918, prices with the average for 1913, it is seen that only 4 articles of the 28 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are beef in Chicago (three price series) and granulated sugar in New York. In most of the months of 1917 the retail prices of these articles were relatively lower than were the wholesale prices.

While the percentage of increase in retail prices was less than that in wholesale prices for most of the articles, it should be noted that a comparison of the actual prices shown in the preceding table indicates that in the majority of cases the margin between the wholesale and the retail price in January, 1918, was considerably greater than in 1913. The following table shows, for example, that the wholesale price of bacon increased 137 per cent between 1913 and January, 1918, while the retail price increased only 69 per cent during the same period. The preceding table shows, however, that the difference between the wholesale price and the retail price of bacon was 16.7 cents per pound in 1913 and 19.7 cents per pound in January, 1918, thus allowing the retailer 3 cents per pound more at the latter date for the part he took in the distribution.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917					1918
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Dec.	Jan.
Beef:										
Steer loin ends (hips), Chicago..W..	100	104	95	122	119	119	113	140	140	119
Sirloin steak, Chicago.....R..	100	112	111	121	114	126	130	132	126	130
Beef:										
Steer rounds, No. 2, Chicago....W..	100	111	109	111	92	118	130	145	130	126
Round steak, Chicago.....R..	100	115	113	119	112	127	132	135	129	135
Beef:										
Steer ribs, No. 2, Chicago.....W..	100	105	92	111	102	134	127	146	127	127
Rib roast, Chicago.....R..	100	109	109	117	114	124	126	127	124	130
Beef:										
No. 2 loins, city, New York.....W..	100	116	108	127	114	120	120	174	139	149
Sirloin steak, New York.....R..	100	106	109	114	110	123	130	137	129	133

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100)—Concluded.

Article and city.	1913: Average for year.	July.			1917					1918
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Dec.	Jan.
Beef:										
No. 2 rounds, city, New York..W..	100	112	112	120	107	140	145	157	149	149
Round steak, New York.....R..	100	108	109	116	110	127	135	145	137	141
Beef:										
No. 2 ribs, city, New York.....W..	100	109	106	119	106	132	126	182	149	156
Rib roast, New York.....R..	100	103	104	111	109	124	128	137	131	135
Pork:										
Loins, Chicago.....W..	100	111	101	111	111	161	168	221	164	181
Chops, Chicago.....R..	100	107	106	114	119	150	154	188	157	166
Pork:										
Loins, western, New York.....W..	100	107	101	109	112	155	155	197	178	174
Chops, New York.....R..	100	106	100	110	114	147	150	184	159	160
Bacon:										
Short, clear sides, Chicago.....W..	100	109	89	125	124	172	194	250	233	237
Sliced, Chicago.....R..	100	108	107	112	107	134	149	162	167	169
Hams:										
Smoked, Chicago.....W..	100	105	98	114	113	146	146	170	183	180
Smoked, sliced, Chicago.....R..	100	127	123	131	125	144	156	165	161	161
Lard:										
Prime, contract, New York.....W..	100	95	73	121	145	195	183	224	237	224
Pure, tub, New York.....R..	100	98	94	105	133	164	171	196	211	206
Lamb:										
Dressed, round, Chicago.....W..	100	114	128	128	134	148	174	181	161	161
Leg of, yearling, Chicago.....R..	100	111	105	117	117	133	145	159	144	155
Poultry:										
Dressed fowls, New York.....W..	100	103	96	118	121	146	136	157	137	164
Dressed hens, New York.....R..	100	103	102	120	122	137	134	151	143	152
Butter:										
Creamery, extra, Chicago.....W..	100	85	85	89	119	142	121	140	153	158
Creamery, extra, Chicago.....R..	100	86	89	93	121	134	119	135	146	150
Butter:										
Creamery, extra, New York....W..	100	87	84	88	122	139	122	137	153	158
Creamery, extra, New York.....R..	100	86	88	91	120	134	119	135	143	150
Butter:										
Creamery, extra, San Francisco.W..	100	77	84	80	112	123	121	145	142	167
Creamery, extra, San Francisco .R..	100	85	87	86	110	116	117	140	139	155
Milk:										
Fresh, Chicago.....W..	100	95	97	95	118	142	124	195	184	184
Fresh, bottled, delivered, Chicago.R..	100	100	100	101	125	125	125	161	149	149
Milk:										
Fresh, New York.....W..	100	86	86	89	146	140	143	206	206	231
Fresh, bottled, delivered, N. Y...R..	100	100	100	100	111	121	127	153	156	167
Milk:										
Fresh, San Francisco.....W..	100	100	97	97	97	97	110	151	151	169
Fresh, bottled, San Francisco....R..	100	100	100	100	100	100	100	121	121	121
Eggs:										
Fresh, firsts, Chicago.....W..	100	83	74	96	215	135	137	164	215	250
Strictly fresh, Chicago.....R..	100	89	85	101	180	129	139	161	201	223
Eggs:										
Fresh, firsts, New York.....W..	100	86	80	97	203	133	141	161	223	259
Strictly fresh, New York.....R..	100	89	82	94	168	107	120	158	184	204
Eggs:										
Fresh, San Francisco.....W..	100	86	82	90	142	105	119	162	168	228
Strictly fresh, San Francisco....R..	100	91	83	89	129	100	105	163	160	190
Flour:										
Winter patent,[1] Kansas City ...W..	100	89	155	118	223	285	278	262	249	252
Aristo, Kansas City.....R..	100	97	132	113	179	231	231	221	205	206
Flour:										
Standard patent,[1] Minneapolis..W..	100	98	153	132	206	241	262	230	221	220
Pillsbury's Best, Minneapolis....R..	100	104	146	125	193	236	240	214	202	203
Flour:										
Fancy patent,[1] St. Louis.....W..	100	88	139	118	207	272	272	269	252	249
Gold Medal, St. Louis.....R..	100	99	135	114	174	212	217	216	202	193
Corn meal:										
Fine, yellow, New York.....W..	100	100	121	136	193	221	286	350	343	313
Fine, yellow, New York.....R..	100	100	103	124	150	168	206	241	250	241
Potatoes:										
White, good to choice, Chicago..W..	100	236	65	159	285	456	428	185	176	193
White, Chicago.....R..	100	182	78	151	263	384	331	184	174	187
Sugar:										
Granulated, New York.....W..	100	98	137	174	153	188	172	191	186	170
Granulated, New York.....R..	100	94	129	161	151	178	171	198	202	198

[1] Beginning in January, 1918, War Standard flour.

COST OF LIVING IN THE PHILADELPHIA SHIPBUILDING DISTRICT.

The following table shows the summary results of an investigation just made by the Bureau of Labor Statistics in cooperation with the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation into the cost of living in the Philadelphia shipbuilding district.

Schedules covering in detail the income and expenditure for the year 1917 of 512 families were secured through personal visits of the agents of the Bureau of Labor Statistics to the homes of families of workers in shipbuilding establishments and others in the localities in which shipbuilding workers reside.

The second column of the table shows the average expenditures per family for the year 1917 for each of the principal items that enter into the cost of living. The third column shows in the form of percentages the proportion of the total amount expended for each item. The last column shows the average percentage of increase in the different items of expenditure of these families from 1914 to 1917. The total increase is a weighted average obtained by multiplying the percentage of increase in the retail prices from 1914 to 1917 by the percentage of expenditure item by item in 1917.

Information as to the increase in the retail prices from 1914 to 1917 of each of the various items of cost of living was obtained, by personal visits of the agents of the Bureau, from retail dealers patronized by workers in the same localities.

AVERAGE EXPENDITURE OF 512 FAMILIES IN PHILADELPHIA SHIPBUILDING DISTRICT IN 1917, FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, PER CENT OF AVERAGE TOTAL EXPENDITURE, AND PER CENT OF INCREASE FROM 1914 TO 1917.

Items of expenditure.	Expenditures per family in 1917.		Per cent of increase from 1914 to 1917.
	Average.	Per cent.	
Clothing:			
Males	$117.87	8.43	54.11
Females	105.46	7.54	49.12
Total	223.33	15.97	51.33
Furniture and furnishings	63.26	4.52	49.84
Food	605.85	43.31	54.41
Housing	168.36	12.04	2.60
Fuel and light	69.22	4.95	21.54
Miscellaneous	268.81	19.22	43.81
Total	1,398.83	100.00	43.81

WHOLESALE PRICES IN THE UNITED STATES AND FOREIGN COUNTRIES, 1890 TO 1917.

In the following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base in order that the trend of prices as shown by these index numbers

may be compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913—i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the correct index numbers for series constructed by averaging the relative prices of individual commodities. This applies to the index numbers of the Annalist, Gibson, the Economist, Sauerbeck, and the Department of Labor of Canada. The index numbers of the Bureau of Labor Statistics, Bradstreet, Dun, and the Bureau of Census and Statistics of Australia are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

Year and month.	Index numbers expressed as percentages of the index number for 1913.								
	United States.					United Kingdom.		Canada.	Australia.
	Bureau of Labor Statistics: 294 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Sauerbeck: 45 commodities.	Department of Labor: 272 commodities (variable).	Bureau of Census and Statistics: 92 commodities.
1890	81	78	.....	[1] 75	75	[1] 83	85	81	97
1895	70	68	70	[1] 67	72	72	73	71	70
1900	80	71	86	77	76	82	88	80	82
1905	86	79	88	83	81	81	85	84	84
1910	100	98	98	98	102	90	92	92	92
1913	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
1914	99	104	97	101	105	99	100	100	106
1915	100	106	107	105	110	123	127	110	147
1916	123	126	128	123	129	160	160	134	138
1917	175	187	170	169	191	204	205	174	.....
1914.									
January	100	102	97	103	100	97	98	101	[2] 100
April	98	101	95	99	99	96	96	101	[2] 102
July	99	104	94	99	101	95	104	99	[2] 109
October	99	107	100	102	108	101	106	102	[2] 113
1915.									
January	98	108	99	103	111	112	118	103	[2] 127
April	99	109	106	103	117	124	125	108	[2] 153
July	101	105	107	103	111	122	126	111	[2] 167
October	101	101	108	105	103	125	134	112	[2] 142
1916.									
January	110	110	119	114	113	143	149	127	[2] 138
April	116	118	128	121	123	156	157	132	[2] 137
July	119	121	125	120	124	156	157	132	[2] 138
October	133	136	131	126	141	171	175	138	[2] 139
1917.									
January	150	151	149	140	150	184	187	154	[2] 140
February	155	159	131	146	156	188	193	160	.....
March	160	170	154	154	166	197	199	163	.....
April	171	188	158	157	188	200	203	169	[2] 146
May	181	203	164	172	204	201	205	177	.....
June	184	198	168	176	197	210	211	179	.....
July	185	189	175	175	200	208	208	179	.....
August	184	190	178	181	203	210	207	181	.....
September	182	195	181	178	206	209	207	179	.....
October	180	200	184	182	207	212	212	179	.....
November	182	199	185	183	206	214	214	183	.....
December	181	200	191	182	209	217	218	187	.....

[1] Average for January and July. [2] Quarter beginning in specified month.

PRICES IN CANADA DURING 1917.

The January, 1918, issue of the Labor Gazette, published by the Canadian Department of Labor, in giving a résumé of prices during 1917, includes a table showing the index numbers of wholesale prices of 19 commodity groups for specified months in 1914, 1915, 1916, and for each month in 1917, the average prices for 1890 to 1899 being taken as the base, or 100; also a table showing the cost per week of a family budget of staple foods, fuel and lighting, and rent in terms of the average price in 60 cities in Canada, covering the same period. The following are the index numbers for the 19 commodity groups in January of each year and in December, 1917:

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES, IN JANUARY, 1914, 1915, 1916, AND 1917, AND DECEMBER, 1917.

[1890 to 1899=100.]

Commodity group.	Index number in January—				Index number in December, 1917.
	1914	1915	1916	1917	
Grains and fodder	140.9	191.7	181.0	258.7	314.1
Animals and meats	194.2	177.9	196.3	249.2	311.8
Dairy products	179.9	177.5	186.7	233.3	253.9
Fish	153.9	160.0	163.7	183.8	239.1
Fruits and vegetables	125.2	115.1	169.6	234.9	255.2
Miscellaneous foods	112.9	133.4	143.2	176.7	226.5
Textiles	135.2	126.1	174.2	216.4	322.8
Hides, leather, and boots	168.1	178.1	193.5	285.9	273.1
Metals	114.7	112.6	198.4	210.9	260.4
Implements	106.6	107.5	116.6	156.5	199.1
Fuel and lighting	113.6	108.9	122.0	159.7	170.0
Lumber	183.5	178.0	178.1	185.8	231.9
Miscellaneous building materials	114.0	108.2	132.4	179.6	209.1
Paints, oils, and glass	140.2	142.9	193.9	213.0	261.2
House furnishings	128.8	131.9	146.7	168.9	208.1
Drugs and chemicals	111.1	135.0	250.4	236.7	276.1
Raw furs	226.5	121.8	269.6	399.5	465.4
Liquors and tobacco	138.8	137.9	136.7	167.2	186.5
Sundries	109.3	113.6	135.1	155.5	196.8
All commodities	136.5	138.9	172.1	208.1	253.5

The changes in the weekly cost of a family budget from January, 1914, to December, 1917, are traced in the following table:

COST PER WEEK OF A FAMILY BUDGET OF FOOD, FUEL AND LIGHTING, AND RENT IN JANUARY OF EACH YEAR, 1914 TO 1917, AND IN DECEMBER, 1917, IN 60 CITIES.

Item.	Cost in January—				Cost in December, 1917.[1]	Per cent of increase December, 1917, over January, 1914.
	1914	1915	1916	1917		
Foods	$7.73	$7.97	$8.28	$10.27	$12.24	58.3
Fuel and lighting	1.90	1.90	1.85	2.13	2.64	38.9
Rent	4.83	4.37	3.98	4.03	4.45	[2] 7.9
Total	14.46	14.24	14.11	16.43	19.33	33.7

[1] Two cities omitted. [2] Decrease.

The report states that the greatest increases in the cost of foods during the year were in meats, eggs, butter, flour, beans, sugar, and potatoes.

WHOLESALE PRICE BULLETIN FOR 1916.

A study of wholesale prices during 1916, covering 342 important commodities, or series of quotations, is contained in Bulletin 226, just issued by this bureau. This report is the latest one of a series published annually since 1902. In addition to detailed data for 1916 average prices are shown for each year back to 1890. The bulletin is of especial interest as showing the changes in wholesale prices during the second year of the War, while the United States was still neutral, and because of the large amount of detailed information which it presents.

The upward movement of wholesale prices which began in the latter part of 1915 continued without interruption through the whole of 1916, becoming most pronounced in the closing months of the year. In December the weighted index number for all the articles studied stood at 118, as compared with 89 in January, indicating an average increase in wholesale prices of nearly 33 per cent, and the increase over the level of prices in December, 1914, was more than 49 per cent.

During 1916 phenomenal advances were recorded in the prices of many commodities belonging to the groups designated as farm products, food, cloths and clothing, fuel and lighting, and metals and metal products. In December as compared with January there was an increase of 30 per cent in average wholesale prices of farm products, which include many food articles in the raw state, 28 per cent in wholesale prices of food, 40 per cent in cloths and clothing, 60 per cent in fuel and lighting, and 47 per cent in metals and metal products. Drugs and chemicals, which showed a steady increase during the first five months, fell to the lowest point of the year in August and September, afterwards increasing until in December they were 2 per cent higher than in January. House-furnishing goods were 9 per cent and lumber and building materials 7 per cent higher in December than in January. The miscellaneous group, which includes such important articles as cottonseed meal and oil, lubricating oil, malt, news-print and wrapping paper, rubber, plug and smoking tobacco, whisky, and wood pulp, rose steadily in price, being 27 per cent higher in December than in January. Of 342 comparable price series secured by the bureau for 1915 and 1916, 318 showed increases in the latter year, 13 showed decreases, and 11 showed no change.

COST OF LIVING IN PORTUGAL.[1]

In the current issue of the journal of the Portuguese Ministry of Labor and Social Affairs[2] are published for the first time (in an article under the above heading) official index numbers intended to show the manner in which the general level of household expenses has been affected by the upward movement of prices of food and certian other necessaries in that country since the outbreak of the War. In Portugal questions relating to the cost of living are in charge of the Department of Economic Defense, attached to the Ministry of Labor and Social Affairs. Immediately upon its formation that department arranged to be supplied regularly each month with particulars of the retail prices of 30 commodities coming within the definitions of food, lighting, fuel, and washing materials. The department has adopted the method already employed by the official statisticians of most countries for computing changes in the general level of food prices (or in the food-purchasing power of money), viz, the method which assumes a fixed standard of family consumption and calculates the changes in the cost of maintaining that standard according to the retail prices returned as prevailing at different dates.

As the result of an inquiry into the economic conditions of the working classes, the Portuguese Ministry of Labor and Social Affairs concludes that in Portugal, in the course of a year, a working-class family of four persons consumes on an average the following quantities of the articles mentioned: Bread, 800 kilograms (1,763.7 pounds); potatoes, 250 (551.2 pounds); beef, 90 (198.4 pounds); mutton, 20 (44.1 pounds); rice, 30 (66.1 pounds); codfish, 30 (66.1 pounds); oil, 40 liters (10.6 gallons); coffee, 12 kilograms (26.5 pounds); beans and corn, 150 liters (4.3 bushels); milk, 180 liters (47.6 gallons); eggs, 40 dozen; sugar, 50 kilograms (110.2 pounds); lard or other fat, 10 (22 pounds); sausage, 12 (26.5 pounds); bacon, 12 (26.5 pounds); wine, 400 liters (105.7 gallons); coal, 500 kilograms (1,102.3 pounds); petroleum, 50 liters (13.2 gallons); and soap, 100 kilograms (220.5 pounds).

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[1] The British Labour Gazette (London) for January, 1918, p. 8.
[2] Boletin da Previdência Social, Ano 1, April-August, 1917. Lisbon.

The general level of prices in the year 1913 in each of the two principal cities in Portugal being taken as 100, the levels prevailing in each of the first six months of 1917 are found to have been the following:

1917	Lisbon (1913=100).	Oporto (1913=100).
January	158.3	148.6
February	166.6	149.7
March	171.8	165.7
April	164.0	172.7
May	169.8	180.3
June	165.0	184.6

Taking the average of the June index numbers for Lisbon and Oporto in the above table, viz, 174.8, having ascertained by means of the inquiry already referred to that in working-class families the proportionate expenditure on each of the four groups of necessaries—(*a*) food, (*b*) fuel and lighting, (*c*) rent, (*d*) clothing, and miscellaneous—is represented by the percentages 75, 10, 10, and 5, respectively, assuming further that the price of clothing has doubled since 1914, and that other classes of expenditure have remained constant, the statistician of the Portuguese Ministry of Labor and Social Affairs concludes that in June, 1917, about 66 per cent more would have had to be spent than had to be spent per month on the average in 1913 to maintain the same working-class standard of living.

WAGES AND HOURS OF LABOR.

RATES OF WAGES PAID TO WORKERS PLACED BY EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918.

In the table which follows are given the rates of wages paid to workers placed in employment by employment offices in the United States on the last day of January, 1918, or the date in January nearest the last day on which workers were placed, in 33 selected occupations. Data are presented for 122 employment offices, comprising 43 Federal employment offices, 3 Federal-municipal employment offices, 6 Federal-State employment offices, 1 Federal-State-municipal employment office, 2 Federal-State-county-municipal employment offices, 7 municipal employment offices, 1 municipal-private employment office, 41 State employment offices, 1 State-county-municipal employment office, and 17 State-municipal employment offices in 38 States and the District of Columbia.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT

[Fed.=Federal; Sta.=State; Co.=County; Mun.=Municipal; Pri.=

State, city, and kind of office.	Blacksmiths.	Boilermakers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Alabama:					
Mobile (Fed.)		$4.50 d.	$4.00 d.	$0.50 h.	
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.).	$5.50 d.	5.50 d.		5.50 d.	$0.35 h.
Arkansas:					
Little Rock (Fed.)	.55 h.	.60 h.		.60 h.	
California:					
Eureka (Fed.)					
Fresno (Fed.)			8.00 d.	5.60 d.	.30 h.
Los Angeles (Fed.)	5.00 d.	5.00 d.	4.50-5.00 d.	4.50-5.00 d.	.30 h.
Los Angeles (Sta.-Mun.)	4.00 d.	.50 h.	5.00 d.	4.00 d.	.25 h.
Sacramento (Fed.)					
San Diego (Fed.)				4.50-5.00 d.	.25-.30 h.
San Francisco (Fed.)	.50 h.	5.38 d.		[3] 6.50 d.	.30 h.
Santa Barbara (Fed.)				4.50 d.	
Colorado:					
Colorado Springs (Sta.)					.25 h.
Denver (Fed.)					
Denver No. 1 (Sta.)				5.00 d.	2.50 d.
Denver No. 2 (Sta.)	5.00 d.			6.00 d.	
Pueblo (Sta.)	.37½ h.			[5] 2.75 d.	2.00 d.
Connecticut:					
Bridgeport (Fed.-Sta.)	.55 h.				.25 h.
Bridgeport (Sta.)	.55 h.				.25 h.
Hartford (Sta.)					.30 h.
New Haven (Sta.)					.25 h.
Norwich (Sta.)					
Waterbury (Sta.)					
Delaware:					
Wilmington (Fed.-Mun.)				.62½ h.	
District of Columbia:					
Washington (Fed.)	.62½ h.			.62½ h.	
Florida:					
Jacksonville (Fed.)				.45 h.	
Miami (Fed.)					
Georgia:					
Savannah (Fed.)	4.00 d.	5.00 d.	5.00 d.	4.00 d.	1.00 d.
Idaho:					
Boise (Mun.)	5.00 d.			.62½ h.	.35 h.
Moscow (Fed.)	4.00 d.	5.28 d.	6.00 d.	5.50 d.	1.50 d.
Illinois:					
Chicago (Fed.)	.50 h.	.50 h.			2.10-2.65 d.
Chicago (Sta.)	.37½-.70 h.	.60 h.	.50 h.	.35-.62½ h.	2.10 d.
East St. Louis (Sta.)	.48 h.	.50 h.	.87½ h.	.70 h.	.15 h.
Peoria (Sta.)	4.00 d.			.60 h.	2.00 d.
Rockford (Sta.)		.45 h.	.75 h.	.62½ h.	.25 h.
Rock Island-Moline (Sta.)	.65 h.	.52-.75 h.	.75 h.	.62½ h.	.25 h.
Springfield (Sta.)	.50-.65 h.	.30-.60 h.	.90 h.	.55 h.	1.50 d.
Indiana:					
Evansville (Sta.)					4.00 w.
Indianapolis (Fed.)	3.92 d.			.45 h.	1.50 d.
Indianapolis (Sta.)		.40 h.		.56 h.	1.50 d.
South Bend (Sta.)				.45 h.	.20 h.
Terre Haute (Sta.)		.50 h.		.55 h.	
Iowa:					
Des Moines (Fed.-Sta.)				.39 h.	
Kentucky:					
Louisville (Sta.)				.50 h.	6.00 w.
Louisville (Mun.-Pri.)				.50 h.	
Louisiana:					
New Orleans (Fed.)	.62½ h.	.62½ h.	.65 h.	[3] .62½ h.	1.00 d.
Maryland:					
Baltimore (Fed.)	.37-.66 h.	.46-.59 h.		.62½ h.	1.00 d.
Massachusetts:					
Springfield (Sta.)	.50 h.	.47-.60 h.	.56 h.	22.00-25.00 w.	[1] 5.00 w.
Michigan:					
Battle Creek (Sta.)		.45 h.		.55 h.	.25 h.
Bay City (Sta.)					
Detroit (Sta.)	.50 h.	.65 h.	.75 h.	.55 h.	.25 h.
Flint (Sta.)	.55 h.	.50 h.	.65 h.	.55 h.	.25 h.
Grand Rapids (Sta.)				.50 h.	.20 h.
Jackson (Sta.)	.45 h.	.45 h.	.75 h.	.55 h.	.25 h.
Kalamazoo (Sta.)				.40-.50 h.	.25 h.
Lansing (Sta.)	.50 h.		.60 h.	.55 h.	.30 h.
Muskegon (Sta.)					
Saginaw (Sta.)					1.00 d.
Minnesota:					
Minneapolis (Fed.)	3.00-4.00 d.	.40-.60 h.	.75 h.	.55 h.	.35 h.
St. Paul (Sta.)	.44 h.	.43 h.	.70 h.	.55 h.	.30 h.

[1] And board. [2] And found. [3] Ship carpenters.

BY EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918.

Private; h.=hour; d.=day; w.=week; m.=month; y.=year.]

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
.....	.....	.....	$2.00 d.	$1.25 d.	.....
$75.00 m.	$50.00 m.	$3.00 d.	.....	[1] 2.00 d.	.....
85.00 m.	8.00 w.	2.50 d.	.....	35.00 m.	$0.30 h.
.....	.....	.....	.....	2.00 d.	.....
70.00 m.	35.00 m.	3.00 d.	.....	[1] 2.00 d.	4.00-5.00 d.
[1] 20.00 w.	15.00 w.	2.75 d.	.60 h.	25.00-40.00 m.	4.00 d.
60.00m-18.00 w.	10.00 w.	2.75 d.	.....	[2] 2.00 d.	.....
.....	.....	.....	.....	.....	.....
2.50-3.00 d.	40.00 m.	2.75 d.	.....	[2] 35.00-40.00 m.	.....
.....	40.00 m.	2.50 d.	.....	[1] 2.00 d.	.....
.....	.....	.....	.....	.....	.....
[1] 17.50 w.	[4] 1.00 d.	3.00 d.	.....	[4] 30.00 m.	.....
.....	.....	.....	.....	.....	.....
50.00 m.	40.00 m.	3.00 d.	.....	40.00 m.	.....
90.00 m.	.....	3.00 d.	.....	[2] 60.00 m.	.....
[1] 40.00 m.	10.00 w.	2.50 d.	.....	[4] 40.00 m.	3.75 d.
21.00 w.	35.00 m.	16.00 w.	.....	35.00 m.	.....
21.00 w.	35.00 m.	18.00 w.	.....	35.00 m.	.....
14.00 w.	.....	.....	.....	40.00 m.	.....
18.00 w.	12.00 w.	18.00 w.	.....	35.00 m.	.....
20.00 w.	10.00 w.	.....	.....	30.00 m.	.....
.....	.....	.....	.....	25.00 m.	.....
.....	5.00-7.00 w.	.....	.....	.....	.....
65.00 m.	.....	15.00 w.	.....	25.00 m.	.....
50.00 m.	.....	.....	.....	1.75 d.	.....
.....	.....	.....	.....	.....	.....
6.00 w.	4.00 w.	1.75 d.	2.25 d.	1.50 d.	1.75 d.
90.00 m.	60.00 m.	4.50 d.	.....	60.00 m.	.....
75.00 m.	45.00 m.	75.00 m.	.....	[1] 50.00 m.	3.50 d.
.....	9.00-15.00 w.	18.00-21.00 w.	.....	35.00-50.00 m.	.....
[4] 25.00-40.00 w.	10.00-15.00 w.	15.00 w.	.35 h.	35.00-40.00 m.	.....
10.00 w.	6.00 w.	3.00 d.	3.00 d.	35.00 m.	.50 h.
11.00 w.	9.00 w.	16.00 w.	.....	35.00 m.	.40 h.
12.00-15.00 w.	10.00-12.00 w.	35.00-40.00 m.	.....	45.00-50.00 m.	.40-.50 h.
18.00 w.	8.00 w.	3.00 d.	6.00 d.	40.00 m.	.42½ h.
10.00-30.00 w.	6.00-12.00 w.	.25-.35 h.	.....	30.00-45.00 m.	3.00 d.
.....	.....	2.00 d.	.....	25.00 m.	.....
.....	6.00 w.	.25 h.	.....	30.00 m.	.....
80.00 m.	8.00 w.	2.50 d.	.....	30.00-35.00 m.	.....
16.00 w.	10.00 w.	16.00 w.	.....	30.00 m.	.....
.....	.....	2.00-2.25 d.	.....	25.00 m.	.....
.....	.....	.....	.....	35.00 m.	.....
40.00 m.	5.00 w.	.....	.....	[6] 30.00 m.	.....
[4] 25.00 m.	.....	2.00 d.	.....	[1] 35.00 m.	.....
14.00 w.	[4] 5.00 w.	.45 h.	.25 h.	30.00 m.	.40 h.
18.00-30.00 w.	7.00 w.	3.50 d.	.....	.....	.....
15.00 w.	.....	15.00-17.00 w.	.....	30.00-35.00 m.	.....
12.00-14.00 w.	8.00 w.	18.00 w.	.....	15.00-20.00 m.	.....
.....	.....	.....	.....	24.00-32.00 m.	.....
[1] 15.00 w.	[1] 12.00 w.	3.25 d.	.30 h.	25.00 m.	.40 h.
25.00 w.	15.00 w.	3.00 d.	.....	26.00 m.	.35 h.
[4] 40.00 m.	[4] 6.00 w.	15.00 w.	.30 h.	[4] 26.00 m.	.....
60.00-80.00 m.	50.00-75.00 m.	2.90 d.	.31 h.	30.00-35.00 m.	.33 h.
15.00 w.	10.00 w.	16.00 w.	.....	25.00 m.	.....
.....	.....	.....	.....	35.00 m.	.....
.....	.....	.....	.....	.....	.....
.....	6.00 w.	2.80 d.	.....	1.50 d.	.....
60.00-75.00 m.	7.00-15.00 w.	15.00-18.00 w.	2.50-3.00 d.	20.00-50.00 m.	.50 h.
50.00 m.	25.00 m.	3.10 d.	.30 h.	35.00-45.00 m.	3.00 d.

[4] And board and room. [5] Rough carpenters. [6] And house.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Alabama:					
Mobile (Fed.)			$0.25½ h.		
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.)	$10.00 w.		[1] 2.00 d.		
Arkansas:					
Little Rock (Fed.)	5.00 w.	$0.75 h.	.30 h.		
California:					
Eureka (Fed.)			3.00 d.		
Fresno (Fed.)			3.00 d.		
Los Angeles (Fed.)	30.00 m.	5.00 d.	2.75 d.	$15.00 w.	$10.00 w.
Los Angeles (Sta.-Mun.)	35.00 m.	4.00 d.	2.50–2.75 d.	16.00 w.	8.00–10.00 w.
Sacramento (Fed.)					
San Diego (Fed.)	20.00–35.00 m.		2.75–3.00 d.		1.50–2.00 d.
San Francisco (Fed.)			3.00 d.		10.00 w.
Santa Barbara (Fed.)			3.25 d.		
Colorado:					
Colorado Springs (Sta.)	30.00 m.		.35 h.	12.00 w.	1.50 d.
Denver (Fed.)			.25 h.		
Denver No. 1 (Sta.)	40.00 m.		2.50 d.		
Denver No. 2 (Sta.)	[2] 35.00 m.		.30 h.		9.00 w
Pueblo (Sta.)	25.00 m.		.30 h.		
Connecticut:					
Bridgeport (Fed.-Sta.)	30.00 m.		.30 h.	.30 h.	.25 h.
Bridgeport (Sta.)	12.00 w.		.35 h.		.25 h.
Hartford (Sta.)	6.00 w.		.35 h.	15.00 w.	.25 h.
New Haven (Sta.)	7.00 w.		3.00 d.	15.00 w.	15.00 w.
Norwich (Sta.)	25.00 m.		3.25 d.		
Waterbury (Sta.)	25.00 m.				8.00 w.
Delaware:					
Wilmington (Fed.-Mun.)	5.00–7.00 w.		.25–.35 h.		
District of Columbia:					
Washington (Fed.)	30.00 m.		.30 h.		
Florida:					
Jacksonville (Fed.)			2.25 d.		
Miami (Fed.)			.25 h.		
Georgia:					
Savannah (Fed.)	3.50 d.	3.50 d.	1.75 d.	6.00 w.	5.00 w.
Idaho:					
Boise (Mun.)	30.00 m.		3.50–4.00 d.		
Moscow (Fed.)	5.00 w.	95.00 m.	3.50 d.	20.00 w.	.22 h.
Illinois:					
Chicago (Fed.)	7.00–10.00 w.		.32 h.		9.00 w.
Chicago (Sta.)	6.00–10.00 w.		.27½–.35 h.		[3] 25.00 m.
East St. Louis (Sta.)	5.00 w.	.75h.	3.00 d.	20.00 w.	9.00 w.
Peoria (Sta.)	6.00 w.		.35 h.		2.00 d.
Rockford (Sta.)	6.00 w.	.65–.75 h.	.40–.50 h.	12.00–14.00 w.	8.00 w.
Rock Island-Moline (Sta.)	6.00 w.	.62½h.	3.00 d.	17.25 w.	8.00 w.
Springfield (Sta.)	30.00–50.00 m.	.25–.50 h.	.20–.50 h.	.20–.30 h.	.15 h.
Indiana:					
Evansville (Sta.)	5.00 w.		1.85 d.		
Indianapolis (Fed.)	6.00 w.		.30 h.		
Indianapolis (Sta.)	8.00–10.00 w.		2.75 d.		
South Bend (Sta.)	5.00 w.		.30 h.		
Terre Haute (Sta.)			.22½–.30 h.		
Iowa:					
Des Moines (Fed.-Sta.)			.24–.26 h.		
Kentucky:					
Louisville (Sta.)	5.00 w.		.30 h.		
Louisville (Mun.-Pri.)			.25 h.		6.00 w.
Louisiana:					
New Orleans (Fed.)	[3] 15.00 m.	7.25 d.	[3] 1.60 d.	10.00 w.	12.00 w.
Maryland:					
Baltimore (Fed.)	5.00 w.	.60 h.	.23–.35 h.		
Massachusetts:					
Springfield (Sta.)	4.00–7.00 w.	.50–.55 h.	.30–.35 h.		
Michigan:					
Battle Creek (Sta.)	4.00–6.00 w.	.45 h.	.25–.30 h.	16.50–18.00 w.	6.00–12.00 w.
Bay City (Sta.)	3.50–5.00 w.	.37 h.	.25–.30 h.		
Detroit (Sta.)	8.00 w.	.35–.71 h.	.35 h.	12.00–18.00 w.	9.00–16.00 w.
Flint (Sta.)	5.00 w.	.45 h.	.30 h.	3.00 d.	1.50 d.
Grand Rapids (Sta.)	[3] 5.00 w.		.30 h.		
Jackson (Sta.)	5.00–7.00 w.	50.00–55.00 m.	.35 h.	18.00–25.00 w.	9.00–12.00 w.
Kalamazoo (Sta.)			.30 h.		7.00 w.
Lansing (Sta.)			.40 h.		
Muskegon (Sta.)			.30 h.		
Saginaw (Sta.)			2.75 d.		
Minnesota:					
Minneapolis (Fed.)	5.00–9.00 w.	.62½ h.	2.50 d.	15.00–18.00 w.	7.00 w.
St. Paul (Sta.)	2.00 d.		.30 h.	.25 h.	.25 h.

[1] And board. [2] And found.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$4.00 d.	$4.50 d.	$0.50 h.		$3.50 d.	
.55 h.		4.25 d.			$10.00 w.
.60 h.				.75 h.	
		5.00 d.		6.50 d.	
5.00 d.	5.00 d.	4.00–5.00 d.	$4.50 d.	5.00 d.	10.00 w.
.50 h.	.50 h.	3.50 d.	5.00 d.	4.00 d.	8.00–14.00 w.
5.80 d.					
.50 h.	.50 h.				8.00–10.00 w
5.80 d.	5.28 d.				10.00 w.
.50 h.					
.62½ h.			7.00 d.	.85 h.	
.50 h.					8.00 w.
.60 h.					
.60 h.					
		.50 h.			
4.50 d.				4.50 d.	
.62 h.		.50 h.		.50 h.	
.62½ h.					
4.25 d.	5.00 d.	4.00 d.	4.00 d.	5.00 d.	12.00 w.
5.28 d.	5.28 d.	5.04 d.	6.00 d.	5.28 d.	40.00 m.
.50–.72 h.					8.00–12.00 w.
.35–.60 h.		4.00 d.	.50 h.	.45–.50 h.	7.00–10.00 w.
.51 h.	.58 h.	.60 h.	.87½ h.	.87½ h.	8.00 w.
.40 h.	5.00 d.				
.35–.45 h.	.35–.40 h.	.55 h.	.62½ h.	.75 h.	8.00 w.
4.00 d.	4.00 d.	.55 h.	.75 h.	5.45 d.	9.00 w.
.30–.65 h.	.40–.55 h.	.50 h.	.65 h.	.90 h.	8.00 w.
.52 h.					7.00 w.
.40 h.		.35 h.		.40–.50 h.	
.60 h.				.35 h.	
.50 h.					
.50 h.					6.00 w.
.62½ h.	.56¼ h.	.65 h.	.62½ h.	.75 h.	5.00 w.
.55 h.					8.00 w.
.55–.60 h.		.50 h.		.65 h.	8.00 w.
.35–.40 h.	4.00 d.				
.60 h.					4.00–10.00 w.
.45 h.	4.75 d.	4.00 d.	6.00 d.	.60 h.	12.00 w.
.45 h.	.60 h.	.55 h.	.55 h.	.65 h.	10.80 w.
	.40 h.				7.00 w.
.45 h.	4.50 h.	.40–.45 h.	.50–.60 h.	.60 h.	6.00–12.00 w.
.40–.50 h.					
3.00–4.00 d.	3.00–4.00 d.	.55 h.	.75 h.	.52 h.	8.00 w.
.62½ h.		.55 h.	.70 h.	.62 h.	

[a] And board and room.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Alabama:					
Mobile (Fed.)					
Arizona:					
Phoenix (Fed.-Sta.-Co.-Mun.)	$1.75 d.			$100.00 m.	$80.00 m.
Arkansas:					
Little Rock (Fed.)				125.00 m.	
California:					
Eureka (Fed.)					
Fresno (Fed.)					
Los Angeles (Fed.)	1.00 d.			85.00 m.	60.00 m.
Los Angeles (Sta.-Mun.)	8.00 w.			75.00-90.00 m.	50.00-100.00 m.
Sacramento (Fed.)					
San Diego (Fed.)	2.00 d.				12.00 w.
San Francisco (Fed.)	2.00 d.			85.00 m.	65.00 m.
Santa Barbara (Fed.)					
Colorado:					
Colorado Springs (Sta.)	1.00 d.				
Denver (Fed.)					
Denver No. 1 (Sta.)					
Denver No. 2 (Sta.)					
Pueblo (Sta.)	2.00 d.				
Connecticut:					
Bridgeport (Fed.-Sta.)					
Bridgeport (Sta.)					
Hartford (Sta.)					
New Haven (Sta.)					
Norwich (Sta.)					
Waterbury (Sta.)					
Delaware:					
Wilmington (Fed.-Mun.)					
District of Columbia:					
Washington (Fed.)				1,100.00 y.	
Florida:					
Jacksonville (Fed.)					
Miami (Fed.)					
Georgia:					
Savannah (Fed.)	8.00 w.	$12.00 w.	$10.00 w.	60.00 m.	50.00 m.
Idaho:					
Boise (Mun.)					
Moscow (Fed.)	5.00 w.		5.00 w.	90.00 m.	65.00 m.
Illinois:					
Chicago (Fed.)	7.00-9.00 w.			18.00 w.	12.00-20.00 w.
Chicago (Sta.)	7.00-9.00 w.		12.00-18.00 w.	75.00-100.00 m.	12.00-18.00 w.
East St. Louis (Sta.)	.20 h.	30.00 w.	.20 h.	90.00 m.	75.00 m.
Peoria (Sta.)					
Rockford (Sta.)	2.00 d.				35.00-45.00 m.
Rock Island-Moline (Sta.)	2.00 d.	80.00 m.	1.50 d.	80.00 m.	60.00 m.
Springfield (Sta.)	2.00 d.	.30-.40 h.		50.00-90.00 m.	40.00-60.00 m.
Indiana:					
Evansville (Sta.)					
Indianapolis (Fed.)					15.00 w.
Indianapolis (Sta.)					
South Bend (Sta.)					
Terre Haute (Sta.)					
Iowa:					
Des Moines (Fed.-Sta.)					
Kentucky:					
Louisville (Sta.)					
Louisville (Mun.-Pri.)			6.00 w.		9.00 w.
Louisiana:					
New Orleans (Fed.)	1.00 d.	2.50 d.	1.75 d.	75.00 m.	60.00 m.
Maryland:					
Baltimore (Fed.)			10.00 w.	60.00 125.00 m.	15.00 w.
Massachusetts:					
Springfield (Sta.)	[1] 1.25 d.			20.00 w.	
Michigan:					
Battle Creek (Sta.)				75.00 m.	10.00-15.00 w.
Bay City (Sta.)					
Detroit (Sta.)			15.00 w.		
Flint (Sta.)	.25 h.	3.00 d.	1.50 d.	80.00 m.	60.00 m.
Grand Rapids (Sta.)					10.00 w.
Jackson (Sta.)	8.00-15.00 w.		8.00-15.00 w.	8.00-29.00 w.	8.00-20.00 w.
Kalamazoo (Sta.)					
Lansing (Sta.)					
Muskegon (Sta.)					
Saginaw (Sta.)					

[1] And board. [2] And found.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
				$1.25 d.	
		$15.00 w.	$10.00 w.	[1] 2.00 d.	[1] $1.75 d.
		65.00 m.			
$6.00 d.				.30 h.	.30 h.
5.50 d.	$10.00 w.	15.00 w.	10.00 w.	10.00-12.00 w.	10.00 w.
	10.00 w.	10.00-15.00 w.	8.00 w.	.30 h.	.25 h.
		9.00-12.00 w.	8.00-10.00 w.	.30 h.	.25-.30 h.
	50.00 m.	[2] 40.00 m.	10.00 w.	.35 h.	
				2.25 d.	
			.25 h.	.35 h.	.25 h.
				2.50 d.	.25 h.
		40.00 m.	35.00 m.	2.50 d.	2.00 d.
		[1] 10.00 w.	[1] 9.00 w.	.30 h.	.30 h.
			8.00 w.	.35 h.	.25 h.
			10.00 w.	.30 h.	.25 h.
			10.00 w.	.35 h.	.25 h.
		[1] 7.00 w.		.35 h.	.25 h.
			30.00 m.	.35 h.	.25 h.
				3.50 d.	1.75 d.
				2.50 d.	2.00 d.
				.35-.42½ h.	
		40.00 m.		.30 h.	
6.00 d.	12.00 w.	6.00 w.	5.00 w.	1.50 d.	1.00 d.
		15.00 w.	10.00 w.	.35 h.	.35 h.
	10.00 w.		[1] 35.00 m.	3.00 d.	1.50 d.
.60-.75 h.			[3] 27.50 m.		2.10-2.65 d.
.60-.75 h.	10.00-12.00 w.	8.00-10.00 w.	9.00-10.00 w.	.35-1.00 h.	.25 h.
.70 h.	10.00 w.	18.00 w.	8.00 w.	.30 h.	.15 h.
		9.00 w.	7.00 w.		
		12.00 w.	1.00-1.50 d.	.35-.40 h.	.20-.25 h.
.62 h.	7.00 w.	10.00 w.	9.00 w.	3.00 d.	.25 h.
	30.00 m.	8.00-20.00 w.	6.00 w.		
.60-.75 h.		7.00 w.	7.00 w.	.30 h.	1.50 d.
		[3] 8.00 w.			1.50 d.
				.25 h.	
		[1] 5.00 w.		2.00 d.	1.10 d.
.56¼ h.	6.00 w.	1.00 d.	1.00 d.	1.00 d.	1.00 d.
	30.00 m.	75.00 m.	30.00 m.		1.00 d.
.47-.60 h.			[1] 5.00 w.	.30 h.	[5] .20 h.
			6.00 w.	.30 h.	
				.25-.30 h.	
.65 h.	12.00-15.00 w.	[1] 10.00 w.	[1] 8.00 w.	.35 h.	.25 h.
.60 h.	9.00 w.	10.00 w.	7.00 w.	.35 h.	.25 h.
6.00-7.00 d.	8.00-10.00 w.	9.00 w.	7.00-8.00 w.	.35 h.	.25 h.
			5.00 w.	.25-.35 h.	.25 h.
			8.00 w.	.30 h.	

[3] And board and room. [4] And dinner. [5] And car fare.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Blacksmiths.	Boilermakers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Mississippi:					
Gulfport (Fed.)			$0.62½ h.	$0.50 h.	
Missouri:					
Kansas City (Fed.-Sta.)	$5.00 d.	$0.76½ h.	.75 d.	.65 h.	$0.25 h.
St. Joseph (Sta.)	4.00 d.			.60 h.	
St. Louis (Fed.-Sta.)	4.60 d.	4.75 d.		.62½ h.	1.60 d.
Montana:					
Butte (Sta.)					.35 h.
Nebraska:					
Lincoln (Fed.-Sta.)					
Omaha (Fed.-Sta.-Co.-Mun.)				.62½ h.	.25 h.
Nevada:					
Reno (Fed.)					
New Jersey:					
Newark (Fed.-Sta.-Mun.)	.30-.35 h.		.65-.70 h.	.45-.62½ h.	1.85 d.
New Mexico:					
Deming (Fed.)				.75 h.	
New York:					
Buffalo (Fed.)					
New York (Fed.)	4.50-6.00 d.	.56 h.		[3] 4.50-6.00 d.	2.00 d.
New York (Mun.)	5.50 d.	5.00 d.	6.00 d.	5.50 d.	8.00-10.00 w.
Ohio:					
Akron (Sta.-Mun.)	.60 h.	.65 h.	.70 h.	.65 h.	2.25 d.
Canton (Sta.)	.40 h.	.50 h.	.75 h.	.40-.60 h.	2.00 d.
Chillicothe (Sta.-Mun.)	.50 h.	.50 h.		.60 h.	1.50 d.
Cincinnati (Sta.-Mun.)	.42½ h.	.42½ h.	.80 h.	.62½ h.	1.60 d.
Cleveland (Fed.)	.50 h.	.62½ h.	.80 h.	.70 h.	2.00 d.
Cleveland (Sta.-Mun.)	.45-.55 h.	.45-.50 h.	.60-.70 h.	.40-.70 h.	.25 h.
Columbus (Sta.-Mun.)				.55 h.	1.75 d.
Dayton (Sta.-Mun.)	.45 h.	.40 h.	.80 h.	.50 h.	1.50 d.
Hamilton (Sta.-Mun.)	3.25 d.				1.10 d.
Lima (Sta.)	.50 h.	.44 h.	.80 h.	.40 h.	.20 h.
Mansfield (Sta.-Mun.)	.40 h.		.70 h.	.50 h.	2.00 d.
Marietta (Sta.)				.40-.50 h.	1.00 d.
Marion (Sta.-Mun.)	.30 h.	.40 h.		.50 h.	.15-.20 h.
Portsmouth (Sta.-Mun.)	.56 h.	.56 h.		.50-.56½ h.	1.50 d.
Sandusky (Sta.-Co.-Mun.)	4.00 d.	4.50 d.	.70 h.	.50 h.	1.50 d.
Springfield (Sta.-Mun.)	.45 h.	.45 h.	.60 h.	.55 h.	1.50 d.
Steubenville (Sta.-Mun.)	.40 h.	.42½ h.	.75 h.	.65 h.	2.00 d.
Tiffin (Sta.-Mun.)	4.00 d.		.70 h.	.60 h.	1.00 d.
Toledo (Sta.-Mun.)	.50 h.	.50 h.	.70 h.	.55 h.	.25 h.
Washington C. H. (Sta.)				.30 h.	1.25 d.
Youngstown (Sta.-Mun.)	.45 h.	.50 h.	.75 h.	.62½ h.	2.10 d.
Zanesville (Sta.-Mun.)	.37½-.40 h.	.42 h.	.70 h.	.52½ h.	1.50 d.
Oklahoma:					
Oklahoma City (Sta.)	3.50 d.			.35 h.	.20 h.
Oregon:					
Portland (Fed.-Mun.)	5.25 d.	5.25 d.	7.00 d.	5.60-6.00 d.	.30 h.
Pennsylvania:					
Philadelphia (Fed.)	.40-.45 h.	.36-.44 h.	.70 h.	.60 h.	6.00-8.00 w.
Pittsburgh (Fed.)	.58 h.	.55 h.	.65 h.	.60 h.	.22 h.
Rhode Island:					
Providence (Fed.)	.47-.60 h.	.47-.60 h.		.43½-.55 h.	
Providence (Sta.)		.47-.60 h.		.35-.45 h.	.20-.25 h.
South Carolina:					
Charleston (Fed.)				3.50 d.	
Tennessee:					
Memphis (Fed.)				.45-.60 h.	
Texas:					
Dallas (Mun.)	4.50 d.	5.00 d.	8.00 d.	5.00 d.	2.00 d.
Del Rio (Fed.)		.45 h.	7.00 d.	4.00 d.	1.00 d.
Fort Worth (Fed.)	.52 h.	.56 h.	.75 h.	.76 h.	.25 h.
Galveston (Fed.)				.62½ h.	
Houston (Fed.)	.53 h.	.75 h.	1.00 h.	.62½ h.	25.00-50.00 m.
Houston (Mun.)				.62½ h.	1.00 d.
Utah:					
Salt Lake City (Fed.)	4.75-6.00 d.	4.50-6.00 d.	6.00 d.	4.50-6.00 d.	1.25-2.00 d.
Washington:					
Bellingham (Fed.-Mun.)				4.25 d.	.25 h.
Everett (Mun.)	5.00 d.		7.00 d.	5.50 d.	1.50 d.
Seattle (Fed.)	5.77 d.	5.77 d.	6.00 d.	5.60 d.	
Seattle (Mun.)	5.00-6.00 d.		.50-.75 h.	4.00-6.50 d.	.30 h.
Spokane (Fed.)	5.00 d.	4.75 d.	6.50 d.	5.00 d.	.35 h.
Spokane (Mun.)	.45 h.	.60 h.	6.00 d.	5.50 d.	.30 h.
Walla Walla (Fed.)	3.00 d.			5.00 d.	
Yakima (Fed.)					.30 h.
Wyoming:					
Cheyenne (Fed.-Sta.)					

[1] And house and garden.
[2] And board.
[3] Ship carpenters.
[4] And board and room.
[5] And maintenance.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$21.00 w.	$12.00–14.00 w.	$18.00 w.	$0.25 h.	$35.00 m.	$0.45 h.
16.00 w.	7.00 w.	14.00 w.		40.00 m.	
60.00 m.	30.00 m.	13.50 w.		[1] 40.00 m.	
21.00 w.	17.50 w.				
				50.00 m.	
75.00 m.	12.00 w.	3.00 d.		40.00 m.	
				[2] 1.50 d.	
15.00–20.00 w.	30.00–35.00 m.	12.00–18.00 w.		15.00–50.00 m.	
60.00 m.					
				15.00–20.00 m.	
	[4] 40.00 m.		.33 h.	[4] 35.00 m.	
75.00 m.	40.00 m.	20.00 w.	.60 h.	40.00 m.	3.75 d.
20.00 w.	40.00 m.	3.50 d.		35.00 m.	.50 h.
15.00 w.	8.00 w.	18.00 w.	.30 h.	30.00–40.00 m.	.40 h.
20.00 w.	10.00 w.	.30 h.		35.00 m.	
80.00 m.	50.00 m.	2.50 d.	.27 h.	[5] 35.00 m.	.60 h.
25.00–30.00 w.	18.00–20.00 w.	18.00 w.	.35 h.	30.00 m.	.45 h.
[2] 16.00 w.		18.00–20.00 w.	.35–.40 h.	[4] 35.00 m.	.40–.50 h.
	9.00 w.	2.50 d.		35.00 m.	
90.00 m.	4.50–6.00 w.	3.00 d.		30.00 m.	
	5.00 w.	15.00 w.		30.00 m.	
75.00 m.	12.00 w.	55.00 m.	.27½ h.	30.00–35.00 m.	.35 h.
12.00 w.	10.00 w.	.30 h.		35.00 m.	.35 h.
		.25 h.		[5] 25.00–45.00 m.	
	20.00 m.	.27½ h.		[6] 30.00 m.	
50.00–75.00 m.	6.00 w.	2.50 d.		40.00 m.	3.30 d.
	8.00 w.	18.00 w.	.35 h.	30.00–40.00 m.	.40 h.
20.00 w.	7.00 w.	15.00–18.00 w.		35.00 m.	.40 h.
75.00 m.	9.00 w.	3.00 d.		35.00 m.	4.50 d.
15.00 w.		2.50 d.		35.00 m.	
[4] 15.00 w.	[4] 10.00 w.	17.00 w.		[4] 30.00 m.	.45 h.
15.00 w.				1.25 d.	
90.00 m.	70.00 m.	3.50 d.		40.00 m.	.40 h.
25.00 w.	10.00 w.	2.75 d.		25.00–30.00 m.	.40 h.
50.00 m.	1.00 d.	2.50 d.		25.00 m.	
75.00–100.00 m.	40.00–80.00 m.	2.75–3.50 d.	.60–1.00 h.	40.00–60.00 m.	4.50 d.
90.00 m.	8.00–15.00 w.	55.00–60.00 m.	.35 h.		35.00 m.
20.00 w.	12.00 w.	3.50 d.		[7] 40.00 m.	
			.40 h.	.30–.60 h.	
10.00–14.00 w.	7.00–12.00 w.	9.00–13.00 w.		25.00–35.00 m.	
	4.00 w.				
90.00 m.	10.00 w.	12.00 w.	2.50 d.	45.00 m.	2.50 d.
25.00 w.	25.00 m.	1.25 d.		1.25 d.	
25.00 w.	10.00 w.	3.50 d.		[2] 30.00–45.00 m.	
				25.00 m.	
45.00–275.00 m.	40.00–100.00 m.	2.00–3.00 d.	.25–.50 h.	15.00–35.00 m.	3.00 d.
60.00 m.	20.00 m.	2.00 d.	.35 h.	25.00 m.	
40.00–125.00 m.	35.00–75.00 m.	3.00–4.00 d.		40.00–75.00 m.	4.50–5.00 d.
	50.00 m.			40.00–55.00 m.	
75.00–100.00 m.	40.00–65.00 m.	3.75 d.	.50 h.	35.00–60.00 m.	4.50 d.
	40.00 m.	[2] 45.00 m.		[2] 50.00 m.	
75.00–125.00 m.	35.00–75.00 m.	3.25–3.75 d.	.45–.50 h.	35.00–70.00 m.	.45 h.
80.00 m.	40.00 m.	75.00 m.		50.00 m.	4.50 d.
90.00 m.	60.00 m.	75.00 m.		50.00 m.	
60.00 m.	7.00 w.			50.00 m.	
[2] 60.00 m.	[2] 30.00 m.	3.30 d.		[2] 35.00–50.00 m.	
		21.00 w.			

[6] And board and room for single men; and house, garden, etc., for married men.
[7] And board, lodging, and washing.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Mississippi:					
Gulfport (Fed.)		$4.00–6.00 d.	$0.25 h.		
Missouri:					
Kansas City (Fed.-Sta.)	$5.00–7.00 w.	.75 h.	.42½ h.	$20.00 w.	$5.00–9.00 w.
St. Joseph (Sta.)	5.00–7.00 w.		.25–.35 h.		1.00 d.
St. Louis (Fed.-Sta.)	[1] 40.00 m.		.22 h.		1.60 d.
Montana:					
Butte (Sta.)	30.00–35.00 m.		4.25 d.		
Nebraska:					
Lincoln (Fed.-Sta.)			.25 h.		
Omaha (Fed.-Sta.-Co. Mun.).	6.00 w.		.30 h.		
Nevada:					
Reno (Fed.)	20.00 m.		3.10 d.		
New Jersey:					
Newark (Fed.-Sta.-Mun.)	25.00–35.00 m.	.50 h.	.25–.40 h.		
New Mexico:					
Deming (Fed.)			50.00–60.00 m.		
New York:					
Buffalo (Fed.)			.30–.40 h.		
New York (Fed.)	[2] 30.00 m.		.37½ h.		[2] 22.00 m.
New York (Mun.)	35.00 m.	5.00 d.	.40 h.		2.00 d.
Ohio:					
Akron (Sta., Mun.)	7.00 w.	.60 h.	.35 h.	18.00 w.	8.00 w.
Athens (Sta.)			.35 h.		
Canton (Sta.)	6.00 w.	.40 h.	.32½ h.	18.00 w.	8.00 w.
Chillicothe (Sta.-Mun.)	6.00 w.	.62½ h.	.35 h.	14.00 w.	8.00 w.
Cincinnati (Sta.-Mun.)	[2] 40.00 m.	.40 h.	.25–.30 h.	15.00 w.	10.00 w.
Cleveland (Fed.)	7.00–8.00 w.	.78½ h.	.35 h.		
Cleveland (Sta.-Mun.)	7.00–8.00 w.	100.00 m.	.30–.40 h.	15.00–18.00 w.	
Columbus (Sta.-Mun.)	6.00 w.		.30 h.		
Dayton (Sta.-Mun.)	4.50–9.00 w.	.35 h.	.30–.40 h.		
Hamilton (Sta.-Mun.)	4.50 w.		.30 h.		
Lima (Sta.)	9.00 w.	.40 h.	.27½ h.	.25 h.	.20 h.
Mansfield (Sta.-Mun.)	5.00 w.	.34 h.	.35 h.	15.00 w.	8.00 w.
Marietta (Sta.)	3.50–5.00 w.		.25 h.		1.00–1.50 d.
Marion (Sta.-Mun.)	3.00–4.00 w.	.50 h.	.27½–.35 h.		
Portsmouth (Sta.-Mun.)	6.00 w.		.30 h.		6.00 w.
Sandusky (Sta.-Co.-Mun.)	5.00 w.	.50 h.	.30 h.		7.00 w.
Springfield (Sta.-Mun.)	5.00–12.00 w.	.45 h.	.30 h.	15.00 w.	6.00 w.
Steubensville (Sta.-Mun.)	7.00 w.	.62½ h.	3.00 d.		
Tiffin (Sta.-Mun.)	6.00 w.	125.00 m.	2.50 d.		1.00 d.
Toledo (Sta.-Mun.)	8.00 w.	.60 h.	.30 h.	15.00 w.	8.00 w.
Washington C. H. (Sta.)	6.00 w.		.25 h.	7.00 w.	5.00 w.
Youngstown (Sta.-Mun.)	7.00 w.	.68 h.	.35 h.	80.00 m.	9.00 w.
Zanesville (Sta.-Mun.)	5.00 w.	3.25 d.	2.50–2.75 d.	17.50 w.	10.25 w.
Oklahoma:					
Oklahoma City (Sta.)	4.00 w.		.25 h.		8.00 w.
Oregon:					
Astoria (Fed.)			3.50 d.		
Portland (Fed.-Mun.)	30.00–40.00 m.	4.50 d.	.35 h.	15.00–21.00 w.	8.64–12.00 w.
Pennsylvania:					
Philadelphia (Fed.)	6.00–10.00 w.	.45 h.	.32–.35 h.		6.00–12.00 w.
Pittsburgh (Fed.)	7.00 w.	.45 h.	.34 h.	15.00 w.	8.00 w.
Rhode Island:					
Providence (Fed.)			.40 h.		8.00 w.
Providence (Sta.)			.28–.35 h.		
South Carolina:					
Charleston (Fed.)			1.75 d.		
Tennessee:					
Memphis (Fed.)		.45–.60 h.	.25–.30 h.		
Texas:					
Dallas (Mun.)	6.00 w.		2.25 d.		
Del Rio (Fed.)	2.50 w.		20.00 m.	.22½ h.	.17½ h.
El Paso (Fed.)	5.00 w.				
Fort Worth (Fed.)	5.00 w.	.75 h.	.20–.35 h.	15.00 w.	10.00 w.
Galveston (Fed.)				30.00 m.	
Houston (Fed.)	3.00–8.00 w.	6.00 d.	.30 h.	10.00–35.00 w.	7.00–15.00 w.
Houston (Mun.)	20.00 m.		2.00 d.		6.50 w.
Laredo (Fed.)					
Utah:					
Salt Lake City (Fed.)	5.00–10.00 w.	5.60 d.	2.90–3.50 d.	16.00–25.00 w.	1.25–2.50 d.
Washington:					
Bellingham (Fed.-Mun.)	4.00–6.00 w.		3.00–3.50 d.		
Everett (Mun.)	20.00–30.00 m.		3.75 d.	90.00–100.00 m.	40.00–50.00 m.
Seattle (Fed.)	[1] 35.00 m.		3.50 d.		
Seattle (Mun.)	15.00–50.00 m.	.65 h.	3.50 d.	15.00–21.00 w.	2.00 d.
Spokane (Fed.)	30.00 m.	6.50 d.	3.50 d.	21.00 w.	13.00 w.
Spokane (Mun.)	6.00 w.		3.50 d.		
Walla Walla (Fed.)	6.00 w.		3.50 d.		
Yakima (Fed.)	[2] 6.00 w.		3.00 d.		
Wyoming:					
Cheyenne (Fed.-Sta.)	40.00 m.		3.00 d.		

[1] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
		$0.40 h.			
$0.55 h.	$0.50 h.	.60 h.	$7.00 d.	$6.00 d.	$6.00 w.
.80 h.				.85 h.	
4.60 d.					
.55 h.		.62½ h.		.75 h.	
.40-.70 h.		4.50 d.		.50-.75 h.	
		90.00 m.			
.45-.58 h.					10.00 w.
6.00 d.	5.00 d.	5.00 d.	6.00 d.	6.00 d.	12.00 w.
.65 h.	.60 h.	.50 h.	.60 h.	.65 h.	9.00 w.
.50 h.	.50 h.	.50 h.	.60 h.	.60 h.	8.00 w.
.50 h.					10.00 w.
.40 h.	.55 h.	.40 h.	.65 h.	28.60 w.	6.00-10.00 w.
.50-.70 h.	5.50 d.	.60 h.	.75 h.	.81¼ h.	12.00-14.00 w.
.40-.60 h.	.45-.50 h.	.40-.55 h.	.50-.60 h.	.75-1.00 h.	9.00-12.00 w.
.50 h.					9.00 w.
.60 h.	.40 h.	.45 h.	.80 h.	.35-.80 h.	10.00 w.
.44½ h.	4.50 d.				
.43 h.	.45 h.	.30 h.	.40 h.	.55 h.	8.50 w.
.40 h.	.40 h.			.45 h.	9.00 w.
.40-.45 h.	.45 h.	.35 h.			8.00 w.
.45 h.	.40 h.			.57½ h.	
.35-.17½ h.	4.00-5.00 d.		5.50 d.		5.00-7.00 w.
.45 h.	.45 h.	.45 h.	.50 h.	4.25 d.	2.10 w.
.57½ h.	.45 h.			.62½ h.	8.00 w.
.45 h.	.40 h.	.60 h.		.70 h.	
.50 h.	.40 h.	.50 h.	.70 h.	.60 h.	6.00 w.
				3.00 d.	8.00 w.
.60 h.	5.50 d.	.60 h.	.68 h.	.65 h.	10.00 w.
.45-.50 h.	.45-.50 h.	.47½ h.	.62½ h.	.53 h.	12.00 w.
5.25 d.	5.25 d.	4.50 d.	7.00 d.	6.50 d.	8.64-15.00 w.
.45 h.		3.00-5.00 d.		4.00 d.	8.00 w.
.55 h.	5.00 d.	.45 h.		.75 h.	10.00 w.
.47-.60 h.					
.47-.60 h.					
				.60 h.	
6.00 d.		4.80 d.	8.00 d.	6.50 d.	
.45 h.		4.00 d.	7.00 d.	7.00 d.	45.00-65.00 m.
					6.00 w.
.52 h.	.60 h.	.75 h.		.81 h.	10.00 w.
.55 h.	.30-.50 h.	.60 h.	.87½ h.	.87½ h.	6.00-15.00 w.
5.00-6.00 d.	6.00 d.	5.50-6.00 d.	7.00 d.	6.50 d.	.90-1.75 d.
					9.00 w.
		5.00 d.	6.50 d.	7.00 d.	9.00-15.00 w.
5.77 d.	5.77 d.	5.00 d.		5.25 d.	
.50-.75 h.		.50-.62½ h.	.50-.60 h.	6.50 d.	10.00 w.
5.00 d.	5.00 d.	5.50 d.	6.00 d.	6.00 d.	12.00 w.
.50 h.	6.00 d.	6.00 d.	6.00 d.	.75 h.	

[2] And board and room.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Minnesota:					
Minneapolis (Fed.)	$8.00–40.00 w.	$18.00–35.00 w.	$12.00 w.	$18.00–21.00 w.	$40.00–75.00 m.
St. Paul (Sta.)					
Mississippi:					
Gulfport (Fed.)					
Missouri:					
Kansas City (Fed.-Sta.)	2.50 d.			20.00 w.	15.00 w.
St. Joseph (Sta.)			.85 h.		12.00 w.
St. Louis (Fed.-Sta.)	2.00 d.		2.25 d.		
Montana:					
Butte (Sta.)					
Nebraska:					
Lincoln (Fed.-Sta.)					
Omaha (Fed.-Sta.-Co.-Mun.)				75.00 m.	15.00 w.
Nevada:					
Reno (Fed.)					
New Jersey:					
Newark (Fed.-Sta.-Mun.)				18.00–24.00 w.	10.00–15.00 w.
New Mexico:					
Deming (Fed.)				100.00 m.	
New York:					
Buffalo (Fed.)					
New York (Fed.)	2.50 d.				15.00 w.
New York (Mun.)	2.50 d.			25.00 w.	18.00 w.
Ohio:					
Akron (Sta.-Mun.)	2.00 d.		2.00 d.	80.00 m.	70.00 m.
Athens (Sta.)					
Canton (Sta.)	8.00 w.		8.00 w.	15.00–25.00 w.	12.00–18.00 w.
Chillicothe (Sta.-Mun.)	1.25 d.		8.00 w.	80.00 m.	60.00 m.
Cincinnati (Sta.-Mun.)	7.00 w.	18.00 w.	13.00 w.	18.00 w.	10.00 w.
Cleveland (Fed.)	2.50 d.		9.00–12.00 w.	90.00 m.	80.00 m.
Cleveland (Sta.-Mun.)	10.00–12.00 w.		8.00 w.	75.00–120.00 m.	50.00–100.00 m.
Columbus (Sta.-Mun.)	2.00 d.		9.00 w.		65.00 m.
Dayton (Sta.-Mun.)	1.50 d.			20.00 w.	16.00 w.
Hamilton (Sta.-Mun.)					9.00 w.
Lima (Sta.)	1.50–4.50 d.			75.00 m.	50.00 m.
Mansfield (Sta.-Mun.)				100.00 m.	60.00 m.
Marietta (Sta.)					
Marion (Sta.-Mun.)				75.00 m.	35.00 m.
Portsmouth (Sta.-Mun.)				65.00 m.	10.00 w.
Sandusky (Sta.-Co.-Mun.)				65.00–100.00 m.	8.00–14.00 w.
Springfield (Sta.-Mun.)	6.00 w.			80.00 m.	10.00 w.
Steubenville (Sta.-Mun.)				80.00 m.	60.00 m.
Tiffin (Sta.-Mun.)	9.00 w.		1.25 d.		15.00 w.
Toledo (Sta.-Mun.)	.20 h.		10.00 w.	100.00 m.	10.00 w.
Washington C. H. (Sta.)			1.00 d.	12.00 w.	9.00 w.
Youngstown (Sta.-Mun.)	2.50 d.			100.00 m.	75.00 m.
Zanesville (Sta.-Mun.)	10.00 w.	20.00–25.00 w.	8.00–10.00 w.	15.00–18.00 w.	10.00–12.00 w.
Oklahoma:					
Oklahoma City (Sta.)				75.00 m.	15.00 w.
Oregon:					
Astoria (Fed.)					
Portland (Fed.-Mun.)	2.00 d.		8.64–12.00 w.	80.00–125.00 m.	60.00–100.00 m.
Pennsylvania:					
Philadelphia (Fed.)	1.50–3.00 d.		1.50–3.00 d.		12.00–18.00 w.
Pittsburgh (Fed.)	1.50 d.			75.00 m.	60.00 m.
Rhode Island:					
Providence (Fed.)				15.00 w.	
Providence (Sta.)					
South Carolina:					
Charleston (Fed.)			1.04 d.	13.00 w.	
Tennessee:					
Memphis (Fed.)				125.00 m.	
Texas:					
Dallas (Mun.)				75.00 m.	65.00 m.
Del Rio (Fed.)				75.00 m.	60.00–75.00 m.
El Paso (Fed.)					
Fort Worth (Fed.)				125.00 m.	85.00 m.
Galveston (Fed.)					
Houston (Fed.)	1.00–3.00 d.		6.00–27.00 w.	60.00–150.00 m.	30.00–125.00 m.
Houston (Mun.)	1.50 d.			100.00 m.	75.00 m.
Laredo (Fed.)				1,000.00 y.	
Utah:					
Salt Lake City (Fed.)	1.50–3.00 d.	20.00–25.00 w.	1.00–2.25 d.	45.00–125.00 m.	40.00–75.00 m.

[1] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
$0.45–.50 h.	$40.00–50.00 m.	$15.00 w.	$7.00–12.00 w.	$0.30–.35 h.	$0.30–.35 h.
.62½h.			18.00 w.	.35 h.	.25 h.
5.25 d.	10.00 w.	14.00 w.	8.00 w.	.30 h.	2.10 d.
		[1] 2.00 d.	1.10 d.	.30 h.	7.50 w.
			1.00 d.		
			14.00 w.		
				.30 h.	
	30.00 m.		8.00 w.		
5.00 d.	10.00–12.00 w.			.30 h.	2.00 d.
		60.00 m.			
				.30–.40 h.	
	10.00 w.		[2] 32.00 m.		2.00 d.
6.00 d.	15.00 w.	[2] 40.00 m.		3.00 d.	2.00 d.
.60 h.	9.00 w.	15.00 w.	8.00 w.	.35 h.	.25 h.
				.35 h.	
.60 h.	8.00 w.	10.00–14.00 w.	8.00–10.00 w.	.40 h.	2.00 d.
		14.00 w.	7.00 w.	.30 h.	
.45 h.	45.00 m.	12.00 w.	6.00 w.	.30 h.	.17 h.
.80 h.	10.00 w.	10.00–12.00 w.	7.00–8.00 w.	2.50 d.	2.00 d.
.75 h.	40.00–60.00 m.	10.00–15.00 w.	8.00–10.00 w.	.30 h.	.25 h.
			6.00 w.	.30 h.	1.75 d.
.65 h.		2.00 d.	8.00 w.	.30 h.	.18 h.
				.25 h.	
.50 h.	.15–.19 h.	[1] 14.00 w.	[1] 5.00 w.		
.60 h.	30.00 m.	12.00 w.	9.00 w.	.35 h.	.25 h.
				.25 h.	1.00 d.
		9.00 w.	5.00 w.	.30 h.	.20 h.
.75 h.	30.00 m.		5.00 w.	.30 h.	.20 h.
.35 h.	7.00 w.		6.00 w.	.30 h.	1.50 d.
	7.00–10.00 w.	12.00 w.	7.00 w.	.30 h.	1.50 d.
		7.00 w.	6.00 w.	.30 h.	
			1.00 d.	2.00 d.	1.00 d.
.45 h.		14.00 w.	7.00 w.	.30 h.	.25 h.
	7.25 w.			2.00 d.	1.00 d.
.60 h.	10.00 w.	50.00 m.	8.00 w.	.35 h.	.25 h.
.42½h.	24.00–37.00 m.	[1] 16.00–18.00 w.	[1] 5.00–7.00 w.	.30 h.	1.50 d.
		8.00 w.	1.00 d.	.25 d.	.20 h.
5.00–6.00 d.	9.00–15.90 w.	13.00–18.00 w.	10.00–12.00 w.	.35 h.	.30 h.
		30.00–60.00 m.	4.00–8.00 w.		1.60–2.00 d.
.40–.45 h.		15.00 w.	10.00 w.	3.00 d.	1.50 d.
.30–.60 h.					
.47–.75 h.		9.00 w.	7.00 w.	.25 h.	.20 h.
	1.50 d.				
.50 h.					
		12.00 w.	10.00 w.	2.25 d.	1.75 d.
		2.00 d.	1.50 d.	1.00 d.	.75 d.
					1.00 d.
		1.50 d.	1.50 d.	2.75 d.	
.65 h.	20.00–45.00 m.	30.00–50.00 m.	25.00–40.00 m.	2.00–3.00 d.	1.00–2.00 d.
		12.00 w.	7.00 w.	.25 h.	1.00 d.
6.50 d.	24.00–60.00 m.	15.00 w.	30.00–40.00 m.	.30–.40 h.	.25–.30 h.

[2] And board and room.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Washington:					
Bellingham (Fed.-Mun.)	.....	.....	.....	.....	.....
Everett (Mun.)	$2.50 d.	.....	.....	$50.00–90.00 m.	$40.00–75.00 m.
Seattle (Fed.)	.....	.....	.....	100.00 m.	85.00 m.
Seattle (Mun.)	2.00 d.	.....	.....	90.00 m.	.....
Spokane (Fed.)	13.00 w.	$21.00 w.	$13.00 w.	85.00 m.	60.00 m.
Spokane (Mun.)	.....	.....	.....	75.00 m.	.....
Walla Walla (Fed.)	.....	.....	.....	.....	.....
Yakima (Fed.)	.....	.....	.....	.....	.....
Wyoming:					
Cheyenne (Fed.-Sta.)	.....	.....	.....	.....	80.00 m.

EMPLOYMENT OFFICES IN THE UNITED STATES, JANUARY, 1918—Concluded.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers female.
			$8.00–10.00 w.	$0.30–.35 h.	$0.25–.30 h.
			10.00 w.	.40 h.	.25 h.
				.40 h.	.25 h.
		$15.00–18.00 w.	9.00–13.00 w.	.35–.50 h.	.30 h.
	$13.00 w.	18.00 w.	13.00 w.	.35 h.	.35 h.
	85.00 m.	20.00 w.	17.50 w.	.35 h.	.30 h.
			10.00 w.	.35 h.	.25 h.
				.35 h.	.30 h.
			12.00 w.		

WAGES AND THE WAR.[1]

A very interesting and valuable study on wages and the War has recently appeared, the object of which is "to show the general trend in rates of compensation to the close of 1917." In order that the figures might be as authoritative as possible, the data were confined to those secured from official and other trustworthy sources, including records and reports of the various Federal and State departments, supplemented by trade and labor publications. A special effort was made to bring up to date the figures in the sources used, and to this end agents were sent to labor unions and industrial establishments and State and municipal agencies. In general the basic data have been brought up to the last month or quarter of 1917, and in some cases 1918 data have been obtained.

The following summarization is taken from the study:

The Effect of the War on Wages.

During the past few years, and more particularly during the period of the War, there has been an increase in money wages in practically all branches of American industry. But there has been absolutely no uniformity in the degree of increase. In some trades there have been wage advances that a little while ago would have appeared wildly incredible. In others the advances have been very moderate, little, if any, greater than had occurred during a period of equal length in the preceding years of peace.

The great advances have taken place in those lines of industry for the products of which the War has created a special demand, such, for instance, as those of the iron and steel industry, the metal trades, coal mining, and shipbuilding. In some industries, such as printing, the War made no special demands; in still others, such as building, the War had a depressing effect. In these cases wage rates show no great upward movements, although almost everywhere there has been some advance.

Many individual workers in these trades, of course, profited by transferring themselves to shipbuilding, munitions making, and other distinctly war industries. With some crafts such a transfer is easy and profitable. Carpenters and steam fitters, for instance, can apply the skill they have developed in the building trades to almost identical work in shipbuilding. But this is not always the case. A printer or a glass blower, for instance, finds no particular demand for his special skill in the war industries. If he changes his job, it must usually be to some form of unskilled work where his craft knowledge is of little or no use. Thus, there would be no profit for him in changing to an unskilled labor status, even though the wage rates of such labor have advanced much more rapidly than the wage rates in his own trade.

It does not appear that the wage advances have been related to the matter of labor organization. The three industries in which perhaps the most notable advances have occurred are iron and steel, bituminous mining, and shipbuilding. The first of these—iron and steel—is almost wholly unorganized. The second—bituminous coal mining—is strongly unionized. The third—shipbuilding—is partly organized and partly unorganized.

[1] Wages and the War: A summary of recent wage movements, by Hugh S. Hanna and W. Jett Lauck. Cleveland, Doyle & Waltz Printing Co., 1918. 356 pp. Charts. Price, $2.

In general, however, the trades and localities which were poorly organized have shown the greatest percentage of increase in wages. This is due simply to the fact that these trades and localities were, as a rule, previously upon a much lower level of wage compensation. Unorganized labor seems more responsive to the immediate demands of the moment than is organized labor. Its wages have tended to rise more rapidly in periods of business activity and to sink more rapidly in periods of business depression.

The Trend of Wages in Different Industries.

It is difficult to show in summary form the recent changes in wage rates that have occurred for all of the trades and occupations covered by this study. A very complete idea, however, of the changes which have taken place is offered in the accompanying tables. The first table shows the relative wages and earnings for a large number of typical occupations and industries in December, 1917 (or January, 1918), as compared with 1911–12, the earlier period being taken as 100. The second table shows the relatives for December, 1917 (or January, 1918), as compared with 1914–15. In each table the per cent of increase in 1917 over the earlier period can be readily seen by deducting 100 from the figures shown. Certain trades are included in the second table which could not be included in the first table because data were lacking for the 1911–12 period.

These tables bring out more clearly than could many pages of text the differing degrees of change which have occurred in the wages of different trades and occupations. All of the entries are for money rates of pay—per hour, day, or piece—except in the cases marked "earnings." Here the entries show changes in earnings, not rates, and earnings, of course, are not strictly comparable with wage rates, as the former are influenced by the amount of time worked.

TABLE 1.—RELATIVE WAGES IN LEADING OCCUPATIONS, DECEMBER, 1917, COMPARED WITH 1911–12.

[1911–12=100.]

	1917 compared with 1911–12.
Compositors and linotype operators (newspapers, day)	111
Electrotypers (finishers)	117
Hod carriers (plaster tending)	117
Motormen and conductors (street railways)	118
Steam fitters (building trades)	119
Structural-iron workers (building trades)	123
Plumbers and gasfitters (building trades)	124
Mining (anthracite)	124
Sheet-metal workers (building trades)	129
Blacksmiths (railroad shops, southeastern)	129
Inside wiremen (building trades)	130
Machinists (navy yard, Philadelphia)	131
Ship smiths (navy yard, Philadelphia)	134
Machinists (railroad shops, southeastern)	135
Boiler makers (railroad shops, southeastern)	136
Ship fitters (navy yard, Philadelphia)	140
Pick mining, bituminous (Hocking Valley district)	142
Pipe fitters (navy yard, Philadelphia)	144
Riveters, chippers, and calkers (shipyard, Washington, Oregon)	144
Blacksmiths (shipyard, San Francisco)	144
Machinists (shipyard, San Francisco)	144
Electricians (shipyard, San Francisco)	144
Shipwrights, joiners, boatmen, millmen (shipyard, San Francisco)	147
Longshoremen (New York)	152
Sheet-metal workers (shipyard, San Francisco)	165
Machine mining, bituminous (Hocking Valley district)	166
Blast furnace (iron and steel)	177
Common labor (iron and steel)	180
Inside labor (most occupations), bituminous (Hocking Valley)	185
Open hearths (iron and steel)	187

TABLE 2.—RELATIVE WAGES IN LEADING OCCUPATIONS, DECEMBER, 1917, COMPARED WITH 1914-15.

[1914-15=100.]

	1917 compared with 1914-15.
Compositors and linotype operators (newspapers, day)	106
Electrotypers (finishers)	111
Hod carriers (plaster tending)	112
Plumbers and gas fitters (building trades)	113
Structural-iron workers (building trades)	113
Steam fitters (building trades)	114
Motormen and conductors (street railways)	115
Sheet-metal workers (building trades)	116
Mining (anthracite)	118
Inside wiremen (building trades)	120
Blacksmiths (railroad shops, southeastern)	123
Boiler makers (railroad shops, southeastern)	124
Longshoremen (New York)	125
Machinists (navy yard, Philadelphia)	126
Machinists (railroad shops, southeastern)	129
Pick mining, bituminous (Hocking Valley district)	130
Ship smiths (navy yard, Philadelphia)	134
Ship fitters (navy yard, Philadelphia)	136
Pipe fitters (navy yard, Philadelphia)	137
New York State, average (weekly earnings)	139
Silk industry (earnings)	140
Riveters, chippers, and calkers (shipyard, Washington, Oreg.)	144
Blacksmiths (shipyard, San Francisco)	144
Machinists (shipyard, San Francisco)	144
Electricians (shipyard, San Francisco)	144
Shipwrights, joiners, boatmen, millmen (shipyard, San Francisco)	147
Machine mining, bituminous (Hocking Valley district)	149
Cotton finishing manufacturing (earnings)	153
Hosiery and underwear manufacturing (earnings)	157
Common labor (iron and steel)	160
Blast furnaces (iron and steel)	161
Loftsmen (shipyards, Delaware River)	165
Electricians (shipyards, Delaware River)	165
Sheet-metal workers (shipyard, San Francisco)	165
Cotton manufacturing (earnings)	165
Open hearths (iron and steel)	167
Sheet-metal workers (shipyards, Delaware River)	167
Machinists (shipyards, Delaware River)	167
Woolen manufacturing (earnings)	170
Riveters (shipyards, Delaware River)	175
Inside labor (most occupations), bituminous (Hocking Valley)	176
Boot and shoe industry (earnings)	177
Holders-on (shipyards, Delaware River)	197
Blacksmiths (shipyards, Delaware River)	205

EFFECT OF THE EIGHT-HOUR LAW UPON WAGES AND HOURS OF RAILROAD EMPLOYEES.

On August 29, 1916, in an address to Congress, President Wilson recommended, among other things, the establishment of an eight-hour day as the legal basis of work and wages alike in the employment of railroad employees actually engaged in the work of operating trains in interstate transportation and the authorization of the appointment by him of a commission of three men "to observe actual results in experience of the adoption of the eight-hour day in railway transportation alike for the men and for the railroads; its effects in the matter of operating costs, in the application of the existing practices and agreements to the new conditions, and in all other practical aspects, with the provision that the investigators shall report their conclusions to the Congress at the earliest possible date, but without

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recommendation as to legislative action, in order that the public may learn from an unprejudiced source just what actual developments have ensued." This appearance of the President before Congress was actuated by failure of an effort on his part to effect an agreement between the national conference committee of the railways, representing more than 90 per cent of the business done by the railroads in the United States, and the railroad brotherhoods,[1] and thus avert a general strike threatened by the employees because certain demands as to wages and hours of labor had been definitely rejected by the railroads and efforts to bring the differences to arbitration had been futile. Congress acceded to the President's suggestion and passed the so-called eight-hour law, which was approved by the President on September 3 and 5, 1916. On October 11, 1916, the commission which Congress had authorized was appointed by the President. The members were George W. Goethals, chairman, E. E. Clark, and George Rublee. The commission entered upon its duties in November. With the cooperation of the railroads and the brotherhoods a large mass of data was collected and has been brought together in the report of the commission submitted to Congress and the President under date of December 29, 1917.[2]

At the outset attention is called to the fact that section 2 of the law directs the commission to report the operation and effects of the institution of the eight-hour standard workday and the facts and conditions affecting the relations between common carriers and employees, but feeling that this language was broad enough "to authorize an encyclopedia on railroad labor," the commission decided to restrict its work somewhat and deal only with topics connected with the proposal to insert an eight-hour basic day in the wage schedules as the time measure of a day's work, and with topics connected with the proposal of the roads.

This indicated that there should be shown the increase in wages resulting from the law, as well as the actual hours and wages paid, by classes of service and occupations; the relation of "straight" time and overtime payments and arbitrary allowances; a description of the leading features of the wage schedules; the conditions of train operation which result in overtime, and the possibility of eliminating those conditions; and, finally, a description of the conditions under which train and engine crews work. This view of the scope of the commission's duties eliminates the question of the reasonableness of the present wages of train or engine crews, as well as the question of the financial condition of carriers as bearing upon their ability to pay an increase. These excluded questions it did not seem possible to deal with adequately.

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[1] The Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors, and the Brotherhood of Railroad Trainmen.

[2] Report of the Eight-Hour Commission. Commission on standard workday of railroad employees, created by act of Congress approved Sept. 3 and 5, 1916, 39 Stat. L., p. 721, sec. 2. Washington, 1918, 503 pp.

The report states that the eight-hour day as the measure of a day's work for the purpose of reckoning compensation for certain classes of railroad employees has become an accomplished fact and that it is understood that the roads have no intention of further contesting the establishment of the eight-hour day for the employees concerned. It appears that in the calendar year 1916 there were 308,373 employees—engineers, firemen, conductors, assistant conductors, baggage men, brakemen, and flagmen in road and yard service, and generally hostlers—who were affected by the eight-hour law, this number representing 17.37 per cent of the total number of railroad employees. The aggregate compensation paid to these employees was $410,743,044 or 28.11 per cent of the compensation paid to all railroad employees.

In giving the increase in the cost to the railroads due to the eight-hour law, the commission presents a table showing that during the month of January, 1917, companies operating 104,355 miles of road paid out on account of their passenger, freight, and yard services wages amounting to an increase of $2,209,000 (15.17 per cent) over the compensation paid under the 1916 schedules and then estimates that if the percentage indicated were applied to the total compensation paid to these same classes of employees in 1916 the total increase in wage cost would be $61,534,532.[1] Employees in the yard service received approximately 24.6 per cent increase in wages; those in the freight service about 15 per cent increase; and those in the passenger service about 2.7 per cent increase.

This showing for the first month of 1917, however, is subject to some modification, for the report states that in yard service there has been a widespread change to eight-hour shifts, and reduction in hours does not mean that the men get the increase noted above; they may even experience a decrease, because where they formerly worked 12 hours on a 10-hour basis they are now working 8 hours for the former 10 hours' pay. Reports covering 175,744 miles of road showed that 11,390 yard crews were placed on 8-hour shifts, and that at the time of the reports 3,486 crews were still working more than 8 hours. This reduction in hours, it is pointed out, does not mean an escape by the carriers from all the increased costs shown in January, for with 24.6 per cent increase in pay per hour the total labor cost must be increased unless the total number of man hours required for a given amount of switching is reduced through increased efficiency.

With regard to the employees, a special study of 69,202 employees in 13 occupations on 64 roads showed that 12.6 per cent received no increase in January, 1917, as a result of the law, and 30.2 per cent

[1] It is stated that this does not include the increase paid to hostlers, which would add about $1,875,000 to this amount.

received increases of less than $10 per month, while 23.4 per cent received increases of $20 and under $30 per month. Data covering engineers on certain selected roads show that during the months of January, March, and May, 1917, the greatest increases were in the yard service and the smallest were in the through passenger service.

In the report it is explained, in connection with a discussion of overtime payments and additional allowances under the eight-hour law, that the eight-hour standard which is being observed in road service is the so-called speed basis of 12.5 miles per hour. This means, for example, that for a run of 100 miles overtime begins after 8 hours have elapsed and for a run of 125 miles overtime will begin at the expiration of 10 hours, 10 being the quotient of 125 divided by 12.5. The effect of the law as applied, it is stated, is normally to leave the compensation for "straight" mileage (that is, all mileage paid for at the mileage rate) or "straight" time (that is, number of hours which constitute a day) unchanged, the same payment now being made for a normal day of 8 hours as was formerly made for a normal day of 10 hours. The mileage rate remains unchanged while the rate per hour is increased. Thus the increase in pay which the observance of the law brings to employees is chiefly in the form of payment for more hours of overtime at an increased rate per hour. This is shown by the statement that for 29,608 employees of a certain railroad, in January, 1917, the "straight" payments for miles, hours, or trips aggregated $2,624,078 under the 1916 schedules, and $2,622,267 under the eight-hour law, or substantially the same. The increase in compensation appears in the overtime payments, being for this road $321,420 under the 1916 schedules and $857,661 under the eight-hour law, an increase of $536,241, or 166.8 per cent.

The average hours of service were found to be shortest in the through passenger service, ranging, on selected roads, from 5.4 to 10.4 per run; and that on the eastern roads, for example, in slow freight service the actual time during which engineers are on duty is from 11.7 to 13 hours per run. In local freight service men work from 11.2 to 12.6 hours per run in all districts.

Several special studies and reports were made under the direction of the commission, the subjects being railway wage schedules and agreements, employment conditions in road and yard service, and the practicability of an actual eight-hour day in railroad train service.

WAGE SCALE FOR ALABAMA COAL MINERS.

In the December issue of the MONTHLY REVIEW (pp. 110 and 111) attention was directed to an order issued by the President on October 27, 1917, granting an increase of 45 cents per ton over the scale of

prices for bituminous coal at the mine, as prescribed in the Executive order of August 21, 1917, this increase being authorized in connection with increases of wages of miners as set forth in an agreement entered into at Washington on October 6, 1917, between the operators and miners of the central field, by which an advance of 10 cents per ton was granted to miners, advances ranging from 75 cents to $1.40 a day were granted to laborers, and an advance of 15 cents was granted for yardage and day workers.

It appears, however, that in Alabama the conditions affecting the industry are different from those in other mining fields, leading the operators and miners to reach an agreement, having the approval of the United States Fuel Administrator, as the result of which a special wage scale will prevail in that territory. This agreement, according to the Fuel Administrator, marks the settlement of a labor controversy which had been in progress for several months and which threatened to interfere with the operation of the mines. An order issued by the Fuel Administrator on February 8 specifies that the allowance of 45 cents per ton to operators, as provided in the Washington agreement of October 6, 1917, shall not apply to Alabama. The order is as follows:

An agreement having been reached by the mine operators of the State of Alabama and the mine workers of Alabama, whereby a scale of wages for miners which is satisfactory to both the operators and miners committee, and the same having been approved by the United States Fuel Administrator; and it having been further mutually agreed between the mine operators and the State of Alabama and the mine workers of Alabama that the above wage agreement modifies the Washington wage agreement of October 6, 1917, in so far as the operators and miners of the State of Alabama are concerned;

The United States Fuel Administrator, acting under authority of an Executive order of the President of the United States dated August 23, 1917, appointing said Administrator, and in furtherance of the purpose of said order and of the act of Congress therein referred to and approved August 10, 1917,

Hereby orders and directs that the terms of the Washington wage agreement of October 6, 1917, and of the orders of the President of the United States and the United States Fuel Administrator of October 27, 1917, allowing 45 cents to be added, until further notice, to the selling prices established by the President, shall not apply to any coal-mining operations whatsoever in the State of Alabama.

The labor controversy, to which reference has been made, threatened serious complications and was settled only after a conference between representatives of the miners and operators and the Fuel Administrator, which resulted in the submission, on December 14, 1917, of recommendations by the Fuel Administrator to the miners' convention at Birmingham, the adoption of the recommendations by the convention on December 21, and the order issued by the Fuel Administrator on January 12, 1918, calling upon the operators to accept without delay the decision of the Administrator.

The salient features of the settlement plan are set forth in the following abridged communication from the Fuel Administrator to the mine workers of Alabama:

* * * the United States Fuel Administrator recommends the following settlement of matters in dispute:

First. That the coal operators of Alabama recognize the right of their employees to join any union, labor organization, or society they may choose, and agree that they shall not be discriminated against in the distribution of work for having joined such organization, providing always that in their affiliation and in the conduct of the organization nothing is done to disturb the relations existing between employer and employee by methods or intimidation or coercion, and provided that employees joining any organization recognize the right of each employee to join or not as he may individually decide, and also recognize the right of the company to insist that no employee shall use the company's time for any purpose other than that for which he is paid and that he must not interfere with the operation of the mine or knowingly do that which will reduce the output.

Second. That they will, upon application through the usual channels for employment, reemploy any man who has been discharged because of his affiliation with the union, but will not obligate themselves to reemploy any man who has made unlawful threats or committed unlawful acts, unless the employer is satisfied that the same acts will not again be committed by the applicant.

Any dispute under this clause shall be referred to the person whose appointment is hereinafter provided for as the permanent umpire, to whom all questions of dispute, as herein provided, shall be referred.[1]

Third. The right of the men to meet in peaceful assemblage shall not be interfered with or abridged.

Fourth. That the managers receive committees of their workmen, said committees to be selected at meetings called for the purpose not oftener than every three months, to present any grievance, disagreement, or dispute that they may have to submit, which shall not be any matter herein settled, waived, rejected or postponed. If they fail to arrive at satisfactory adjustment with the superintendent, of matters complained of, the same are to be submitted to the highest official of the company available, who shall pass upon the question within a period of 10 days. Should the matter complained of not be adjusted satisfactory to the committee, then either the committee or the company may appeal to the permanent umpire herein provided for, whose decision shall be made within 30 days and be final and binding upon all parties. * * *

Sixth. A checkweighman selected as required by law from among mine workers employed at the mine may be placed on each tipple at the expense of the miners and his duties shall be those prescribed by the laws of the State. * * *

Seventh. In view of the fact that a large proportion of the coal produced in Alabama is sold under contracts that do not expire until July 1, 1918, the consideration of the following matters, namely, the uniform readjustment of tonnage and yardage rates, all day labor and dead work rates, the increase or decrease of the existing wage rates, it is agreed shall be postponed until July 1, 1918. * * *

Ninth. This understanding shall be in effect and binding upon the coal operators and mine workers during the continuation of the war, and not to exceed two years from April 1, 1918.

Tenth. The semimonthly pay day shall be established at all mines. * * *

[1] During the latter part of February H. C. Selheimer, of Birmingham, was appointed umpire by United States Judge Grubb, of the Northern District of Alabama.

The operator and his superintendent and his mine foremen shall be respected in the management of the mine and the direction of the working force. The authority to hire or discharge shall be vested in the mine superintendent or mine foreman. * * *

Provision is made for the establishment of the 8-hour work day, from 7.30 a. m. to 4 p. m., with one-half hour for lunch. The agreement contains a paragraph binding the operators and miners to accept the so-called penalty clause proposed by the Fuel Administrator as a safeguard against any suspension, by reason of labor disputes, of coal production during the war, Under this clause which has been put into every working agreement approved by the Fuel Administrator, both mine workers and operators undertake to pay a heavy penalty for each day production is curtailed through the fault of either party to the agreement.

CHANGES IN WAGE RATES IN THE DRESS AND WAIST INDUSTRY OF NEW YORK CITY.

In an article describing the recent workings of trade agreements in the women's clothing industries of New York City, published in the December, 1917, issue of the MONTHLY REVIEW, mention was made (p. 34) of the fact that conferences were being held between representatives of the Dress and Waist Makers' Union and the New York Dress and Waist Manufacturers' Association for the purpose of reaching some mutually satisfactory adjustment regarding a demand made by the workers for a general wage increase of 25 per cent.

The result of these conferences has recently been announced. It is of interest to note that this wage adjustment was arrived at by a mutual understanding between the parties themselves and without the assistance of the board of arbitration of the industry. The new wage rate went into effect on January 7, 1918.

The following table shows the new rates as well as those which were in operation prior to this year:

NEW AND OLD WAGE RATES.

Occupation.	Rate per—	In effect— Jan. 7, 1918.	In effect— Prior to Jan. 7, 1918.
WEEK WORKERS.			
Cutters:			
Full-fledged, doing also pattern grading	Week	$31.00	$29.00
Full-fledged	do	29.50	27.50
Grade A—First year in the trade	do	8.00	7.00
Grade B—Second year in the trade	do	14.50	13.25
Grade C—Third year in the trade	do	22.00	20.00
Grade D—Fourth year in the trade	do	25.00	23.00
Drapers	do	18.00	16.50
Joiners	do	15.50	14.30
Sample makers	do	18.00	16.50
Examiners	do	14.00	12.50
Finishers	do	12.00	10.50
Pressers (on woolens)	do	27.00	25.00
Ironers, male	do	20.00	18.50
Ironers, female	do	17.00	15.50
Cleaners:			
Girls under 16, first year	do	8.00	7.00
Girls under 16, second year	do	9.00	8.00
Girls over 16, first year	do	9.00	8.00
Girls over 16, second year	do	10.50	9.50
PIECEWORKERS.			
Operators	Hour [1]	.4125	.38
Pressers	do	.53	.49
Ironers	do	.4125	.38
Hemstitchers	do	.4125	.38
Lace runners			
Button sewers			
Tuckers			
Closers	do	.5425	.50
Sleeve setters			
Hemmers			
Buttonhole makers			

[1] Base rate.

INCREASE IN SALARIES IN THE CENTRAL ADMINISTRATIVE OFFICE UNDER THE MINISTER OF WAR IN FRANCE.[1]

The Journal Officiel of January 5, 1918, publishes two decrees modifying the decrees of February 1, 1909, and providing for a reorganization of the central administrative office under the minister of war.

The decrees provide for a slight increase in the number of assistant chiefs and clerks and for the following increases in salaries: Assistant chiefs of bureaus have been advanced from 7,000 to 8,000 francs ($1,351 to $1,544) for the higher grades: from 6,500 to 7,000 francs ($1,254.50 to $1,351) for the first grade; from 6,000 to 6,500 francs ($1,158 to $1,254.50) for the second grade; and from 5,500 to 6,000 francs ($1,061.50 to $1,158) for the third grade. Principal clerks' salaries are increased on an average 1,000 francs ($193) and other clerks' salaries by 600 francs ($115.80) and 700 francs ($135.10).

The salaries are to be so distributed that the average salary of the chiefs shall not exceed 9,500 francs ($1,833.50); of the assistant chiefs, 6,500 francs ($1,254.50); of the principal clerks, 5,000 francs ($965); and for all other classes, 3,250 francs ($627.25).

[1] La République Française, Paris, Jan. 6, 1916.

MINIMUM WAGE.

MINIMUM WAGE LAW OF MINNESOTA HELD CONSTITUTIONAL.

Another State is added to the growing list of those whose laws providing a minimum standard of wages for women and minors have been upheld by their courts of last resort. Eleven States had laws of this type at the beginning of 1917, and one other State enacted similar legislation during that year. The first determination of constitutionality was by the Supreme Court of Oregon, but despite the favorable action of this court both legislation and enforcement were largely at a standstill pending the determination of the appeal taken to the Supreme Court of the United States. This case was decided April 9, 1917, the result being to leave the decision of the Oregon Supreme Court unchanged. The Supreme Court was equally divided, Mr. Justice Brandeis, who had acted as an attorney for the State in upholding the law prior to his elevation to the bench, not voting (MONTHLY REVIEW, May, 1917, pp. 687, 688). Following the above the Supreme Court of Arkansas, on June 4, 1917, sustained the minimum wage law of that State (MONTHLY REVIEW, November, 1917, pp. 948, 949).

A third State, Minnesota, takes its place beside Oregon and Arkansas by a decision of its supreme court handed down December 21, 1917 (Williams *v.* Evans, 165 N. W., 495). The law of Minnesota resembles that of Oregon rather than that of Arkansas, in that its administration rests with a commission having certain discretionary powers and does not prescribe by statute the scale of wages to be paid. Two points were therefore raised against the act, one involving the power of the legislature to interfere with private contracts and the other raising the question of the delegation of legislative authority. The action originated in a motion to enjoin the enforcement of the law, and the court below issued the injunction on the ground that the statute was unconstitutional and void, overruling the demurrer of the commission holding the contrary view. The Supreme Court held, however, that "we do not look to the Constitution to find the legislative power of a State. The State legislature possesses all legislative power not withheld or forbidden by the terms of the State or Federal Constitution." The fourteenth amendment to the Federal Constitution was then discussed and numerous cases cited in which the police power of the State had been exercised to modify or restrict the liberty of contract in behalf of the general

welfare as conceived by the legislature. The court found the limits to be in arbitrary restraint as opposed to reasonable regulation, citing the decision of the Supreme Court in the Lochner case (198 U. S., 45, 25 Sup. Ct., 539; Bul. No. 59, p. 340).

The court decided that it had no concern with the policy or justification of such legislation, but must consider only whether there was a reasonable basis for the legislative belief that the conditions of employment were dangerous to the morals of the workers and to the health of the workers themselves and of future generations as well. Conceding that such statutes if applicable to men might not necessarily be held valid, a difference was held to exist in the case of women in the matter of their ability to secure a just wage, and furthermore in the consequences of an inadequate wage. Reference was made to the recognition of the economic facts involved by the Supreme Court of the United States in the case of Muller *v.* Oregon (208 U. S., 412, 28 Sup. Ct., 324; Bul. No. 75, p. 631), and Muller *v.* Wilson (236 U. S., 373, 35 Sup. Ct., 342; Bul. No. 189, p. 133). It was also noted that the Oregon and Arkansas laws had been upheld by the supreme courts of their respective States, as mentioned above, and the law was sustained as applicable both to women and to minors, the latter by like reasoning as for women.

As to the contention that the law was unconstitutional because it delegated legislative power to the commission, it was held that there was no such delegation, but only an authorization to determine such facts as the law itself requires to be decided before it shall take effect, saying, "The true distinction is between the delegation of power to make the law, which necessarily involves a discretion as to what it shall be, and conferring authority or discretion as to its execution, to be exercised under and in pursuance of the law. The first can not be done; to the latter no valid objection can be made." C. M. & Z. R. R. Co. *v.* Commissioners of Clinton County, 1 Ohio St., 77, quoted in Field *v.* Clark, 143 U. S., 649, 12 Sup. Ct., 495. Other cases were also cited, some of which were referred to in the discussion of a case before the Supreme Court of Wisconsin involving the same question (MONTHLY REVIEW, July, 1916, pp. 136-147; see also MONTHLY REVIEW for February, 1917, pp. 208, 209).

Other minor objections were raised relating to classification and to the powers of advisory boards. As to the former it was said that the objection was not well taken, the limitations of the Constitution being flexible enough to permit of practical application; while the latter point was not involved in the case, and the validity of these provisions could not affect the validity of the entire act. Therefore, without passing upon the specific point, the constitutionality of the law in its general purpose and method was upheld.

EMPLOYMENT AND UNEMPLOYMENT.

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of January, 1918, and in cases where figures are available, for the corresponding month in 1917. For the United States figures are given from public employment offices in 39 States and the District of Columbia, Federal employment offices in 28 States, Federal-State employment offices in 3 States, a Federal-State-county-municipal employment office in 1 State, a Federal-municipal employment office in 1 State, State employment offices in 15 States, a State-county-municipal employment office in 1 State, State-municipal employment offices in 3 States, municipal employment offices in 8 States, and a municipal-private employment office in 1 State. Figures from two Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Alabama.												
Mobile (Federal)	(1)	6	(1)	1,364	6	[2] 91	(1)	(1)	(1)	46	(1)	18
Arizona.												
Phoenix (Federal)	.....	370	.....	897	.....	[2] 468	.....	(1)	.....	703	.....	726
Arkansas.												
Little Rock (Federal)	.....	27	.....	1,873	.....	[2] 824	.....	(1)	.....	538	.....	508
California.												
Fresno (State)	.....	508	.....	1,014	.....	[2] 625	.....	(1)	.....	970	.....	876
Los Angeles (Federal)	.....	197	.....	329	.....	[2] 311	.....	(1)	.....	272	.....	213
Los Angeles (State-municipal)	2,526	2,749	5,257	4,157	[2] 2,486	[2] 3,887	(1)	(1)	5,139	4,417	4,458	4,906
Oakland (State)	676	1,163	871	1,595	519	[2] 925	426	(1)	927	1,571	705	1,166
Sacramento (Federal)	.....	4	.....	67	.....	[2] 89	.....	(1)	.....	20	.....	20
Sacramento (State)	219	270	433	869	233	[2] 597	108	(1)	321	782	245	664
San Diego (Federal)	436	661	661	952	[2] 893	[2] 991	(1)	(1)	1,028	1,275	642	827
San Francisco (Federal)	471	708	786	1,459	[2] 1,171	[2] 2,473	(1)	(1)	620	1,692	371	1,434
San Francisco (State)	1,069	1,837	1,729	3,360	1,993	[2] 2,556	628	(1)	1,818	3,633	1,324	2,628
Total	.....	.....	.....	.....	.....	.....	.....	.....	9,853	14,632	7,745	12,734

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work. New registrations.		Persons applying for work. Renewals.		Persons referred to positions.		Positions filled.	
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Colorado.												
Colorado Springs (State)	410	612	410	612	[1] 522	[1] 676	(2)	(2)	336	(2)	336	534
Denver (Federal)	33	15	33	160	[1] 78	[1] 445	(2)	(2)	53	385	18	87
Denver No. 1 (State)	155	353	155	(2)	[1] 378	[1] 768	(2)	(2)	135	(2)	135	205
Denver No. 2 (State)	143	560	143	560	[1] 143	[1] 495	(2)	(2)	107	(2)	107	149
Pueblo (State)	.....	365	.....	365	.....	[1] 413	.....	(2)	.....	(2)	.....	352
Total	.....	.....	.....	.....	.....	.....	.....	.....	631	385	596	1,327
Connecticut.												
Bridgeport (Federal)	.....	526	.....	621	.....	789	.....	.....	.....	612	.....	560
Bridgeport (State)	(2)	(2)	713	621	[1] 800	[1] 789	(2)	(2)	(2)	(2)	624	560
Hartford (State)	(2)	(2)	835	612	[1] 1,087	[1] 712	(2)	(2)	(2)	(2)	688	541
New Haven (State)	(2)	(2)	823	707	[1] 1,288	[1] 880	(2)	(2)	(2)	(2)	701	614
Norwich (State)	(2)	(2)	259	267	[1] 272	[1] 303	(2)	(2)	(2)	(2)	234	219
Waterbury (State)	(2)	(2)	159	115	[1] 173	[1] 226	(2)	(2)	(2)	(2)	109	91
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	612	2,356	2,615
Delaware.												
Wilmington (Federal)	.....	8	.....	800	.....	[1] 821	.....	(2)	.....	766	.....	736
District of Columbia.												
Washington (Federal)	.....	334	.....	1,863	.....	[1] 1,755	.....	(2)	.....	2,039	.....	1,755
Florida.												
Jacksonville (Federal)	(2)	13	(2)	1,268	18	[1] 956	(2)	(2)	2	868	2	633
Key West (Federal)	.....	.....	.....	.....	.....	[1] 24	(2)	(2)	.....	8	.....	8
Miami (Federal)	24	7	29	13	96	[1] 61	.....	(2)	30	17	18	17
Pensacola (Federal)	.....	2	.....	35	.....	[1] 2	.....	(2)	.....	.....	.....	.....
Tampa (Federal)	.....	.....	.....	.....	.....	[1] 34	.....	(2)	.....	.....	.....	.....
Total	.....	.....	.....	.....	.....	.....	.....	.....	32	893	20	658
Georgia.												
Atlanta (Federal)	.....	45	.....	748	.....	[1] 216	.....	(2)	.....	77	.....	77
Savannah (Federal)	1	6	25	175	[1] 20	[1] 235	(2)	(2)	15	23	11	15
Total	.....	.....	.....	.....	.....	.....	.....	.....	15	100	14	92
Idaho.												
Boise (municipal)	124	.....	263	100	[1] 263	[1] 78	(2)	(2)	124	78	124	77
Moscow (Federal)	1	15	1	80	1	[1] 120	(2)	(2)	1	56	1	56
Total	.....	.....	.....	.....	.....	.....	.....	.....	125	134	125	133
Illinois.												
Chicago (Federal)	666	1,606	3,484	11,487	[1] 3,646	[1] 10,870	(2)	(2)	3,088	10,356	2,892	8,435
Chicago (State)	4,373	3,296	16,288	14,135	14,258	9,264	1,750	5,965	15,411	14,428	11,783	11,999
East St. Louis (State)	616	671	1,204	933	562	357	568	539	1,093	879	989	827
Peoria (State)	641	811	812	1,424	162	290	630	852	743	1,127	742	1,120
Rock Island-Moline (State)	318	778	581	2,893	356	1,190	250	1,001	456	2,125	61	2,072
Rockford (State)	455	445	754	1,010	458	689	265	198	581	650	522	591
Springfield (State)	374	533	467	788	160	348	300	713	416	690	389	577
Total	.....	.....	.....	.....	.....	.....	.....	.....	21,788	30,255	17,378	25,621

[1] Number applying for work. [2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Indiana.												
Evansville (State)	136	18	359	87	161	568	32	105	432	217	359	217
Fort Wayne (State)	318	358	440	685	[1] 136	(2)	(2)	(2)	435	676	409	676
Indianapolis (Federal)	199	91	592	560	[1] 774	[1] 677	(2)	(2)	511	516	423	470
Indianapolis (State)	625	882	669	875	689	800	78	75	689	875	575	852
South Bend (State)	120	130	464	241	383	400	24	163	250	400	228	231
Terre Haute (State)	161	99	447	450	[1] 434	345	(2)	87	434	420	372	420
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,751	3,104	2,366	2,866
Iowa.												
Des Moines (Federal-State)	26	47	58	428	87	139	25	24	49	131	24	69
Kansas.												
Topeka (State)	87	53	136	68	71	74	4	1	65	59	60	51
Kentucky.												
Louisville (State)	157	103	157	103	[1] 343	[1] 137	(2)	(2)	157	117	157	117
Louisville (municipal-private)	.....	291	315	384	351	384	1,000	478	349	387	145	243
Total	.....	.....	.....	.....	.....	.....	.....	.....	506	504	302	360
Louisiana.												
New Orleans (Federal-State)	65	109	125	1,525	363	[1] 217	(2)	(2)	341	1,238	75	915
Maine.												
Portland (Federal)	.....	2	.....	57	.....	[1] 12	.....	(2)	.....	2	.....	2
Maryland.												
Baltimore (Federal)	107	161	125	3,273	[1] 294	[1] 2,885	(2)	(2)	214	2,193	214	953
Massachusetts.												
Boston (Federal)	6	161	16	3,356	[1] 49	[1] 5,317	(2)	(2)	7	2,894	7	1,382
Boston (State)	1,685	1,121	1,898	1,491	[1] 1,122	[1] 1,458	(2)	(2)	[3] 3,075	[3] 2,837	1,334	1,152
Springfield (State)	804	596	1,067	1,009	[1] 403	[1] 421	(2)	(2)	[3] 1,282	[3] 1,155	787	679
Worcester (State)	969	632	1,300	831	[1] 514	[1] 607	(2)	(2)	[3] 1,383	[3] 1,189	757	524
Total	.....	.....	.....	.....	.....	.....	.....	.....	5,747	8,075	2,885	3,737
Michigan.												
Battle Creek (State)	53	156	144	413	[1] 106	[1] 550	(2)	(2)	93	413	93	413
Bay City (State)	38	24	122	154	[1] 193	[1] 236	(2)	(2)	61	180	61	180
Detroit (State)	1,700	1,258	4,030	4,510	(2)	[1] 4,933	(2)	(2)	4,030	4,933	4,030	4,530
Flint (State)	491	213	491	708	(2)	[1] 783	(2)	(2)	491	610	491	594
Grand Rapids (State)	437	320	679	1,074	(2)	[1] 1,354	(2)	(2)	567	1,162	567	1,060
Jackson (State)	279	436	546	458	[1] 574	[1] 510	(2)	(2)	540	441	(2)	436
Kalamazoo (State)	144	159	344	239	[1] 411	[1] 479	(2)	(2)	344	234	344	206
Lansing (State)	43	103	201	535	[1] 112	[1] 1,027	(2)	(2)	99	525	99	525
Muskegon (State)	77	43	212	345	[1] 217	[1] 288	(2)	(2)	185	184	159	183
Saginaw (State)	102	74	508	335	[1] 513	[1] 602	(2)	(2)	513	335	513	335
Total	.....	.....	.....	.....	.....	.....	.....	.....	6,923	9,017	6,357	8,462

[1] Number applying for work. [2] Not reported. [3] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Minnesota.												
Duluth (State)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	1,192	918
Minneapolis (State)	(1)	1,084	(1)	1,605	(1)	[2] 1,524	(1)	(1)	(1)	1,450	1,557	1,245
St. Paul (State)	(1)	(1)	(1)	479	(1)	(1)	(1)	(1)	(1)	(1)	817	463
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	1,450	3,566	2,626
Mississippi.												
Gulfport (Federal)	(1)	1	(1)	210	83	[2] 209	(1)	(1)	(1)	162	(1)	127
Missouri.												
Kansas City (Federal-State)	411	578	620	1,770	(1)	[2] 2,360	(1)	(1)	697	1,666	606	1,539
St. Joseph (State)	(1)	519	887	1,011	(1)	842	(1)	18	(1)	860	702	828
St. Louis (Federal-State)	322	201	1,060	1,490	(1)	[2] 1,169	(1)	(1)	656	1,108	639	1,084
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,353	3,634	1,947	3,451
Montana.												
Butte (municipal)	393	(1)	(1)	581	[2] 940	[2] 667	(1)	(1)	(1)	(1)	261	484
Nebraska.												
Lincoln (Federal)	.....	69	.....	86	.....	[2] 82	.....	(1)	.....	82	.....	69
Omaha (Federal-State-county-municipal)	182	759	336	975	[2] 829	1,050	(1)	390	326	1,117	283	1,041
Total	.....	.....	.....	.....	.....	.....	.....	.....	326	1,199	283	1,110
Nevada.												
Reno (Federal)	24	31	44	100	[2] 36	70	(1)	(1)	36	55	36	55
New York.												
Albany (State)	472	577	793	872	521	690	334	449	823	1,077	468	629
Buffalo (Federal)	948	979	1,574	1,829	[2] 1,508	[2] 1,254	(1)	(1)	1,808	1,530	1,402	1,013
Buffalo (State)	983	969	1,779	1,829	1,478	999	98	255	1,934	1,540	1,390	1,013
New York City (Federal)	5,676	3,672	7,475	5,854	[2] 7,212	[2] 7,464	(1)	(1)	8,270	5,644	5,035	4,021
New York City (State)	1,763	2,041	2,565	2,939	1,436	1,637	671	1,030	2,725	3,069	1,624	1,786
New York City (municipal)	3,025	1,897	3,320	2,256	[2] 2,790	1,456	(1)	1,378	4,361	2,417	2,526	1,616
Rochester (State)	1,250	985	1,828	1,472	936	1,081	720	504	1,658	1,432	942	787
Syracuse (State)	953	878	1,341	1,465	893	829	227	328	1,204	1,398	818	1,038
Total	.....	.....	.....	.....	.....	.....	.....	.....	22,783	18,107	14,205	11,903
Ohio.												
Akron (State-municipal)	(1)	(1)	2,097	2,207	876	1,147	2,104	1,954	1,824	1,855	1,418	1,604
Athens (State-municipal)	.....	(1)	.....	56	.....	49	.....	82	.....	53	.....	28
Canton (State-municipal)	.....	(1)	.....	539	.....	475	.....	265	.....	518	.....	355
Chillicothe (State-municipal)	.....	(1)	.....	360	.....	267	.....	244	.....	331	.....	265
Cincinnati (State-municipal)	(1)	(1)	1,553	1,822	1,690	1,792	3,280	4,145	1,601	1,848	1,109	1,477
Cleveland (Federal)	18	29	22	442	[2] 81	[2] 457	(1)	(1)	62	312	14	123
Cleveland (State-municipal)	(1)	(1)	7,325	5,686	3,173	2,703	8,233	8,779	6,344	5,410	5,121	4,348

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Ohio—Concluded.												
Columbus (State-municipal)	(1)	(1)	2,801	2,723	744	1,019	2,367	3,712	1,926	2,714	1,674	2,181
Dayton (State-municipal)	(1)	(1)	1,097	1,644	819	1,843	1,493	2,393	902	1,595	794	1,248
Hamilton (State-municipal)	.....	(1)	.....	233	.....	148	.....	71	.....	179	.....	142
Lima (State-municipal)	.....	(1)	.....	296	.....	408	.....	334	.....	296	.....	235
Mansfield (State-municipal)	.....	(1)	.....	1,409	.....	526	.....	975	.....	1,327	.....	1,191
Marietta (State-municipal)	.....	(1)	.....	94	.....	166	.....	65	.....	140	.....	103
Marion (State-municipal)	.....	(1)	.....	337	.....	366	.....	119	.....	379	.....	309
Portsmouth (State-municipal)	.....	(1)	.....	554	.....	460	.....	180	.....	578	.....	320
Sandusky (State-municipal)	.....	(1)	.....	184	.....	188	.....	75	.....	204	.....	167
Springfield (State-municipal)	.....	(1)	.....	327	.....	452	.....	641	.....	311	.....	248
Steubenville (State-municipal)	.....	(1)	.....	616	.....	365	.....	348	.....	621	.....	444
Tiffin (State-municipal)	.....	(1)	.....	152	.....	212	.....	398	.....	243	.....	154
Toledo (State-municipal)	(1)	(1)	2,680	3,213	1,160	2,241	2,360	4,527	2,102	3,225	1,744	2,911
Washington C. H. (State-municipal)	.....	(1)	.....	41	.....	64	.....	44	.....	50	.....	24
Youngstown (State-municipal)	(1)	(1)	1,411	1,376	915	913	835	1,277	1,317	1,357	1,160	1,252
Zanesville (State-municipal)	.....	(1)	.....	147	.....	248	.....	93	.....	171	.....	103
Total	.....	.....	.....	.....	.....	.....	.....	.....	16,078	23,717	13,034	19,232
Oklahoma.												
Enid (State)	(1)	67	71	113	[2] 115	[2] 121	(1)	(1)	64	99	65	86
Muskogee (State)	(1)	223	330	288	[2] 355	[2] 412	(1)	(1)	307	464	253	212
Oklahoma City (State)	(1)	395	331	652	[2] 387	[2] 726	(1)	(1)	344	682	365	438
Tulsa (State)	(1)	542	893	677	[2] 858	[2] 649	(1)	(1)	833	570	832	513
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,548	1,755	1,455	1,249
Oregon.												
Astoria (Federal)	20	5	37	16	[2] 484	[2] 12	(1)	(1)	35	2	33	2
Portland (Federal)	601	1,409	829	3,226	[2] 1,278	[2] 3,619	(1)	(1)	838	2,970	796	2,778
Portland (municipal)	423	1,410	587	2,454	[2] 380	[2] 110	(1)	(1)	(1)	(1)	565	2,457
Total	.....	.....	.....	.....	.....	.....	.....	.....	873	2,972	1,394	5,237
Pennsylvania.												
Altoona (State)	(1)	19	248	264	93	[2] 193	26	(1)	101	186	97	176
Erie (State)	.....	69	.....	443	.....	326	.....	67	.....	266	.....	235
Harrisburg (State)	(1)	176	1,123	1,525	330	292	137	146	313	376	268	342
Johnstown (State)	(1)	30	171	94	66	79	19	9	73	70	59	64
New Castle (State)	.....	61	.....	184	.....	[2] 46	.....	(1)	.....	25	.....	25
New Kensington (State)	.....	40	.....	93	.....	[2] 316	.....	(1)	.....	57	.....	57
Philadelphia (Federal)	.....	262	.....	3,853	.....	[2] 3,578	.....	(1)	.....	2,396	.....	2,326
Philadelphia (State)	(1)	526	1,838	10,132	1,040	9,623	968	341	1,655	8,600	1,438	8,380
Pittsburgh (Federal)	.....	44	.....	1,735	.....	[2] 945	.....	(1)	.....	638	.....	614
Pittsburgh (State)	(1)	147	883	3,059	710	1,304	235	146	687	1,429	633	1,393
Reading (State)	.....	10	.....	15	.....	[2] 41	.....	(1)	.....	8	.....	2
Scranton (State)	.....	79	.....	155	.....	72	.....	3	.....	64	.....	64
Williamsport (State)	.....	13	.....	58	.....	65	.....	4	.....	54	.....	44
York (State)	.....	19	.....	26	.....	[2] 34	.....	(1)	.....	14	.....	11
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,829	14,183	2,495	13,733

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JANUARY, 1917 AND 1918—Concluded.

UNITED STATES—Concluded.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work. New registrations.		Persons applying for work. Renewals.		Persons referred to positions.		Positions filled.	
	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.	Jan., 1917.	Jan., 1918.
Rhode Island.												
Providence (Federal)	.....	16	.....	548	.....	[1] 650	.....	(2)	.....	403	.....	304
Providence (State)	149	146	167	243	103	312	84	39	(2)	243	167	243
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	646	167	547
South Carolina.												
Charleston (Federal)	2	11	2	226	[1] 155	[1] 175	(2)	(2)	137	117	137	117
Tennessee.												
Memphis (Federal)	(2)	6	(2)	10,000	[1] 70	[1] 2,130	(2)	(2)	5	1,750	5	881
Texas.												
Dallas (municipal)	192	219	310	459	246	[3] 710	16	16	344	570	298	298
El Paso (Federal)	.....	60	.....	115	.....	[1] 92	.....	(2)	.....	65	.....	28
Fort Worth (Federal)	.....	32	.....	610	.....	[1] 1,561	.....	(2)	.....	939	.....	483
Fort Worth (municipal)	132	122	277	282	1,101	[4] 756	43	11	200	282	194	271
Galveston (Federal)	13	4	13	8	[1] 34	[1] 91	(2)	(2)	29	36	19	29
Houston (Federal)	.....	.....	.....	.....	.....	15	.....	(2)	.....	2	.....	2
Houston (municipal)	(2)	(2)	(2)	(2)	652	585	248	228	(2)	(2)	675	695
Total	.....	.....	.....	.....	.....	.....	.....	.....	573	1,894	1,186	1,806
Washington.												
Aberdeen (Federal)	12	6	38	23	[1] 114	[1] 53	(2)	(2)	36	23	36	23
Bellingham (Federal-municipal)	106	99	237	191	[1] 307	[1] 273	(2)	(2)	201	154	182	133
Everett (municipal)	(2)	(2)	(2)	245	(2)	(2)	(2)	(2)	(2)	64	256	234
North Yakima (Federal)	201	245	296	573	[1] 595	[1] 690	(2)	(2)	257	446	232	416
Seattle (Federal)	114	250	218	7,100	[1] 1,560	[1] 2,500	(2)	(2)	150	5,404	122	4,962
Seattle (municipal)	2,306	3,900	3,523	7,183	(2)	(2)	(2)	(2)	3,591	7,032	3,161	6,688
Spokane (Federal)	30	50	60	97	[1] 199	[1] 231	(2)	(2)	56	76	55	72
Spokane (municipal)	972	809	1,995	1,325	125	[1] 75	20	(2)	1,907	1,290	1,907	1,112
Tacoma (Federal-municipal)	335	552	677	1,344	[1] 1,424	[1] 3,768	(2)	(2)	656	1,255	650	1,220
Walla Walla (Federal)	34	250	58	290	[1] 321	[1] 240	(2)	(2)	45	108	32	98
Total	.....	.....	.....	.....	.....	.....	.....	.....	6,899	15,852	6,633	14,958
Wisconsin.												
La Crosse (State-municipal)	210	92	117	291	[1] 221	275	(2)	(2)	141	214	63	137
Milwaukee (State-county-municipal)	3,735	1,293	1,628	4,229	[1] 3,224	4,061	(2)	(2)	3,373	4,085	2,591	3,222
Oshkosh (State-municipal)	189	108	126	187	[1] 178	174	(2)	(2)	113	107	80	72
Superior (State-municipal)	666	215	269	952	[1] 609	800	(2)	(2)	682	791	388	733
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,309	5,197	3,122	4,164
Grand total	.....	.....	.....	.....	.....	.....	.....	.....	107,349	168,534	90,895	146,166

CANADA.

Quebec.												
Montreal (provincial)	267	165	591	475	[1] 490	[1] 428	(2)	(2)	500	458	406	398
Quebec (provincial)	(2)	19	113	85	[1] 153	[1] 85	(2)	(2)	(2)	58	102	45
Total	.....	.....	.....	.....	.....	.....	.....	.....	500	516	508	443

[1] Number applying for work.
[2] Not reported.
[3] Including 640 transients.
[4] Including 476 transients

The table below shows, by months and kind of office, the operations of the public employment offices reporting to the Bureau of Labor Statistics for the year 1917.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, BY MONTHS, 1917.

Month, and kind of office.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
January:						
Federal	13,869	26,002	[1] 33,780	(2)	26,698	20,008
State-county, etc.	40,049	78,867	62,152	30,472	91,263	77,601
Total	53,918	104,869	95,932	30,472	117,961	97,609
February:						
Federal	12,473	28,482	[1] 29,701	(2)	23,532	13,367
State-county, etc.	31,054	79,572	55,819	26,345	73,149	63,555
Total	43,527	108,054	85,520	26,345	96,681	76,922
March:						
Federal	21,367	36,950	[1] 23,933	(2)	35,452	27,271
State-county, etc.	48,249	104,139	62,868	35,836	94,043	83,838
Total	69,616	141,089	86,801	35,836	129,495	111,109
April:						
Federal	22,664	42,074	[1] 39,247	(2)	37,451	28,745
State-county, etc.	54,569	129,824	70,920	35,911	104,694	102,631
Total	77,233	171,898	110,167	35,911	142,145	131,376
May:						
Federal	22,004	46,125	[1] 48,099	(2)	41,301	32,061
State-county, etc.	57,224	150,893	89,512	32,862	128,476	118,591
Total	79,228	197,018	137,611	32,862	169,777	150,652
June:						
Federal	20,449	51,718	[1] 43,145	(2)	40,678	32,330
State-county, etc.	53,817	153,855	95,331	44,382	135,683	120,147
Total	74,266	205,573	138,476	44,382	176,361	152,477
July:						
Federal	19,710	64,406	[1] 50,866	(2)	46,239	38,113
State-county, etc.	64,162	163,121	111,545	35,854	129,659	124,583
Total	83,872	227,527	162,411	35,854	175,898	162,696
August:						
Federal	22,742	81,350	[1] 65,000	(2)	57,247	46,859
State-county, etc.	62,902	183,871	118,584	35,094	143,023	194,738
Total	85,644	265,221	183,584	35,094	200,270	241,597
September:						
Federal	24,842	84,226	[1] 57,031	(2)	56,552	46,586
State-county, etc.	64,491	166,360	100,420	33,854	134,451	123,367
Total	89,333	250,586	157,451	33,854	191,003	169,953
October:						
Federal	26,890	83,928	[1] 69,031	(2)	62,104	51,093
State-county, etc.	64,052	174,285	104,054	55,949	142,113	130,914
Total	90,942	258,213	173,085	55,949	204,217	182,007
November:						
Federal	27,397	90,722	[1] 78,139	(2)	67,226	58,027
State-county, etc.	51,793	139,879	99,098	38,593	127,098	115,591
Total	79,190	230,601	177,237	38,593	194,324	173,618

[1] Including renewals. [2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, BY MONTHS, 1917—Concluded.

Month, and kind of office.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
December:						
Federal	22,250	82,029	[1] 81,898	([2])	62,840	51,439
State-county, etc	42,747	127,994	85,744	35,563	111,154	101,115
Total	64,997	210,023	167,642	35,563	173,994	152,554
Total for year:						
Federal	256,657	718,012	619,870	([2])	557,320	445,899
State-county, etc	635,109	1,652,660	1,056,047	440,715	1,414,806	1,356,671
Grand total	891,766	2,370,672	1,675,917	440,715	1,972,126	1,802,570

[1] Including renewals. [2] Not reported.

REPORT OF EMPLOYMENT EXCHANGES IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) FOR FOUR WEEKS ENDING DECEMBER, 7, 1917.

As reported by the British Labor Gazette of January, 1918, the total number of workpeople remaining on the register of the 385 British employment offices on December 7, 1917, was 100,901, compared with 110,091 on November 9, 1917, and with 101,206 on December 8, 1916. These figures comprise workers in professional, commercial, and clerical, as well as industrial occupations.

The operations of the employment exchanges for the four weeks are summarized as follows:

Item.	Men.	Women.	Boys.	Girls.	Total.
On registers November 9, 1917	30,669	63,247	7,621	8,554	110,091
Number of individuals registered during period	91,339	124,980	20,728	18,603	255,650
Total	122,008	188,227	28,349	27,157	365,741
Registrations during period	3,491	3,386	406	378	7,661
On registers December 7, 1917	29,282	56,643	7,251	7,725	100,901
Vacancies notified during period	88,980	57,201	12,140	10,084	163,405
Vacancies filled during period	53,660	49,795	9,962	7,873	121,290
Applicants placed in other districts	15,860	9,304	1,647	1,181	27,992

The average daily number of registrations and of vacancies filled for the four weeks ending December 7, 1917, is shown in the following table, together with comparative figures for the periods ending November 9, 1917, and December 8, 1916.

Department.	Average registrations per day in period ending—			Average vacancies filled per day in period ending—		
	Dec. 7, 1917.	Nov. 9, 1917.	Dec. 8, 1916.	Dec. 7, 1917.	Nov. 9, 1917.	Dec. 8, 1916.
Men	3,951	4,027	3,430	2,236	2,287	1,943
Women	5,349	5,686	5,722	2,075	2,287	2,423
Boys	881	935	677	415	434	358
Girls	791	837	728	328	353	343
Total	10,972	11,485	10,557	5,054	5,361	5,067

EMPLOYMENT IN SELECTED INDUSTRIES IN JANUARY, 1918.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in January, 1918, from representative manufacturing establishments in 13 industries. Comparing the figures for January, 1918, with those from identical establishments for January, 1917, it appears that in 3 industries there was an increase in the number of people employed and in 10 a decrease. Cigar manufacturing shows an increase of 4.9 per cent while automobile manufacturing shows a decrease of 10.4 per cent.

Nine industries show an increase in the total amount of the pay roll for January, 1918, as compared with January, 1917. The greatest increase shown—18.3 per cent—is in woolen. Cotton manufacturing and iron and steel show increases of 17.4 and 15.2 per cent, respectively. A decrease in the total amount of the pay roll of 4 industries is shown. The greatest decrease—11.9 per cent—is in leather manufacturing; while silk shows a decrease of 5.3 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY, 1917, AND JANUARY, 1918.

Industry.	Establishments reporting for January both years.	Period of pay roll.	Number on pay roll in January—		Per cent of increase (+) or decrease (−).	Amount of pay roll in January—		Per cent of increase (+) or decrease (−).
			1917	1918		1917	1918	
Boots and shoes	71	1 week	65,546	59,540	− 9.2	931,188	930,681	− 0.1
Cotton manufacturing	49	...do	51,319	50,379	− 1.8	544,578	639,422	+17.4
Cotton finishing	17	...do	14,735	14,356	− 2.6	198,713	221,693	+11.6
Hosiery and underwear	54	...do	29,090	28,740	− 3.2	310,993	328,237	+ 5.5
Woolen	47	...do	45,916	45,841	− .2	614,801	727,272	+18.3
Silk	37	2 weeks	16,621	14,990	− 9.8	382,313	362,024	− 5.3
Men's ready-made clothing	34	1 week	23,122	22,839	− 1.2	344,663	385,472	+11.8
Iron and steel	114	½ month	194,922	198,773	+ 2.0	8,191,218	9,435,639	+15.2
Car building and repairing	26	...do	33,473	31,532	− 5.8	1,098,101	1,152,979	+ 5.0
Cigar manufacturing	62	1 week	20,363	21,352	+ 4.9	243,832	265,869	+ 9.0
Automobile manufacturing	45	...do	110,256	98,816	−10.4	2,183,095	2,122,457	− 2.8
Leather manufacturing	30	...do	15,314	13,947	− 8.9	275,385	242,192	−11.9
Paper manufacturing	51	...do	28,550	28,638	+ .3	429,448	452,163	+ 5.3

The table below shows the number of persons actually working on the last full day of the reported pay period in January, 1917, and January, 1918. The number of establishments reporting on this question is small and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JANUARY, 1917, AND JANUARY, 1918.

Industry.	Establishments reporting for January both years.	Period of pay roll.	Number actually working on last full day of reported pay period in January—		Per cent of increase (+) or decrease (−).
			1917	1918	
Boots and shoes	20	1 week	11,305	9,865	−12.7
Cotton manufacturing	29	...do	24,064	23,695	− 1.5
Cotton finishing	13	...do	10,338	10,119	− 2.1
Hosiery and underwear	10	...do	9,676	9,202	− 4.9
Woolen	38	...do	34,278	34,612	+ 1.0
Silk	20	2 weeks	11,852	10,726	− 9.5
Men's ready-made clothing	3	1 week	3,304	3,881	+17.5
Iron and steel	93	½ month	156,069	153,117	− 1.9
Car building and repairing	26	...do	28,954	27,484	− 5.1
Cigar manufacturing	15	1 week	4,261	4,351	+ 2.1
Automobile manufacturing	24	...do	67,070	59,594	−11.1
Leather manufacturing	14	...do	10,420	9,449	− 9.3
Paper making	13	...do	9,318	9,846	+ 5.7

The figures in the table below show that in 2 of the 13 industries there were more persons on the pay roll in January, 1918, than in December, 1917. Boots and shoes shows the larger increase—0.4 per cent—and car building and repairing shows an increase of 0.3 per cent. Decreases are shown in 11 industries. Men's ready-made clothing shows the greatest decrease—4.9 per cent—while woolen shows a decrease of 4.6 per cent.

All of the 13 industries reporting show decreases in the total amount of pay roll when comparing January, 1918, with December, 1917, which is doubtlessly explained by unfavorable weather conditions and a shortage of fuel experienced by many plants during the pay-roll period under consideration. In a few cases the operation of plants was hindered by labor disturbances. Automobile manufacturing and iron and steel show the greatest decreases—12.1 per cent and 11.1 per cent, respectively.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER, 1917, AND JANUARY, 1918.

Industry.	Establishments reporting for December and January,	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
			December, 1917.	January, 1918.		December, 1917.	January, 1918.	
Boots and shoes	69	1 week	58,269	58,526	+0.4	921,143	916,849	− 0.5
Cotton manufacturing	54	...do	56,466	55,980	− .9	724,042	693,462	− 4.2
Cotton finishing	17	...do	14,979	14,356	−4.2	244,158	221,693	− 9.2
Hosiery and underwear	54	...do	29,059	28,162	−3.1	356,145	321,436	− 9.7
Woolen	48	...do	48,366	46,140	−4.6	805,504	732,764	− 9.0
Silk	36	2 weeks	14,790	14,480	−2.1	386,033	353,117	− 8.5
Men's ready-made clothing	33	1 week	17,679	16,810	−4.9	299,373	270,197	− 9.7
Iron and steel	113	½ month	198,129	195,768	−1.2	10,442,511	9,282,358	−11.1
Car building and repairing	21	...do	26,073	26,158	+ .3	1,036,898	924,151	−10.9
Cigar manufacturing	60	1 week	21,181	21,044	− .6	273,199	259,243	− 5.1
Automobile manufacturing	44	...do	98,820	97,062	−1.8	2,372,006	2,085,576	−12.1
Leather manufacturing	30	...do	14,349	13,947	−2.8	256,937	242,492	− 5.6
Paper making	49	...do	27,756	27,312	−1.6	471,314	429,928	− 8.8

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for December, 1917, and January, 1918. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN DECEMBER, 1917, AND JANUARY, 1918.

Industry.	Establishments reporting for December and January.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			December, 1917.	January, 1918.	
Boots and shoes	23	1 week	11,447	11,321	−1.1
Cotton manufacturing	34	...do	27,810	27,624	− .7
Cotton finishing	13	...do	10,676	10,119	−5.2
Hosiery and underwear	16	...do	11,834	11,216	−5.2
Woolen	37	...do	36,764	34,300	−6.7
Silk	19	2 weeks	10,273	9,937	−3.3
Men's ready-made clothing	3	1 week	3,555	3,881	+9.2
Iron and steel	91	½ month	151,171	145,295	−3.9
Car building and repairing	21	...do	23,309	23,041	−1.1
Cigar manufacturing	20	1 week	4,595	4,525	−1.5
Automobile manufacturing	25	...do	60,995	59,658	−2.2
Leather manufacturing	14	...do	8,750	8,568	−2.1
Paper making	14	...do	9,641	9,442	−2.1

CHANGES IN WAGE RATES.

In 10 of the 13 industries there were establishments reporting increases in wage rates during the period December 15, 1917, to January 15, 1918, and in 3 industries no establishment reported a change. A number of firms did not answer the inquiry relating to

the wage-rate changes, but in such cases it is probably safe to assume that no changes were made.

Boots and shoes: The report from 1 plant showed an increase of 5 per cent to all its employees.

Cotton manufacturing: One plant reported an increase of 10 per cent to all hands except overseers.

Cotton finishing: One establishment reported an increase of 10 per cent but did not report the number of workers affected.

Hosiery and underwear: Reports from four plants showed changes in the wage rates. One plant reported a 10 per cent increase to its entire force. One plant reported an increase of 8 per cent to 90 per cent of its employees. One plant reported a "general" increase of 15 per cent, and another plant an increase of 16⅔ per cent, but gave no data as to the number of employees affected.

Silk: One plant reported an increase of 10 per cent affecting its force in general, while a second reported a bonus of 10 per cent to all its force.

Men's ready-made clothing: One plant reported a 5 per cent increase in two departments.

Iron and steel: Reports from 24 plants show an increase in the wage rates. One plant reported an increase of 5 per cent to about a third of its employees. One plant reported a 4 per cent increase to about 60 per cent of its force. One plant granted an increase of 3 per cent to 40 per cent of its employees, and another plant reported a premium of slightly more than 5 per cent of total pay roll. Four plants granted an increase of 0.0188 per cent to numbers of their employees ranging from 50.7 per cent to 54.6 per cent, and 4 plants granted a 0.0254 per cent increase to 34.5 per cent, 36.2 per cent, 38.2 per cent, and 38.5 per cent, respectively. One plant reported an average increase of 5 per cent, while in another plant there was a 5 per cent increase to all employees. Reports from 5 plants showed an average increase of 5½ per cent; 1 plant an average of 8 per cent increase, and 2 an average of 10 per cent increase. One plant reported an increase but gave no data.

Car building and repairing: One plant reported an increase of 20 per cent to 6½ per cent of its force and an increase of 4 cents per hour to laborers, while a second plant reported an increase of 0.02 per cent, but gave no statement as to the number affected.

Automobile manufacturing: Reports from 4 establishments showed increases in the wage rates. One plant reported an increase of approximately 20 per cent to slightly more than 6 per cent of the force. One plant reported an increase of 30 cents and under per hour to 10 per cent of its employees; between 30 cents and 40 cents per hour to 7 per cent, and over 40 cents per hour to 4 per cent of

its employees. One plant granted an increase of 10 per cent to 8 per cent of its force.

Leather manufacturing: One plant reported a 10 per cent increase giving no statement as to the number affected, and another plant reported an increase of 15 cents per day per man on entire force.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN DECEMBER, 1917.

The table on page 159 pertaining to the condition of employment in Great Britain and Ireland was compiled from a report published in the British Labor Gazette of January, 1918.

No important changes relating to the number of employees in December, 1917 as compared with November, 1917, are shown.

Dressmaking and millinery show a decrease of 2.2 per cent; dock and riverside labor, a decrease of 3.7 per cent; seamen, a decrease of 4.4 per cent, while no other trade shows a change of as much as 2 per cent. In comparing December, 1917, with December, 1916, on this point more important changes are seen. The cotton trade shows a decrease of 11.7 per cent, dock and riverside labor a decrease of 28.3 per cent; seamen, a decrease of 18.1 per cent; food preparation, a decrease of 14.9 per cent, while all other trades show a change of less than 10 per cent each.

Earnings of employees show few important changes in December as compared with November. The cotton trade shows an increase of 11.4 per cent: hosiery, 6.6 per cent; bleaching, printing, dyeing, and finishing, 9.0 per cent, while the other trades show increases ranging below these.

In comparing December, 1917, with December, 1916, on the question of earnings of employees, more important changes are shown, all of which are increases. The tailoring trades show an increase of 41.8 per cent; linen, an increase of 40.8 per cent; brick, an increase of 29.1 per cent; jute, an increase of 24.5 per cent. Twelve trades show increases ranging from 12.8 per cent to 23.6 per cent, while the other trades reporting increases of earnings of employees show percentages ranging below 10 per cent.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN DECEMBER, 1917, AS COMPARED WITH NOVEMBER, 1917, AND DECEMBER, 1916.

[Compiled from figures in the Labor Gazette (London), January, 1918.

Industries, and basis of comparison.	Per cent of increase (+) or decrease (−) in December, 1917, as compared with—	
	November, 1917.	December, 1916.
Coal mining: Average number of days worked	− 6.2	− 1.1
Iron mining: Average number of days worked	− .3	+ 2.1
Quarrying: Number of employees	− 1.0	− 9.5
Pig iron: Number of furnaces in blast	− 1.3	+ 2.1
Iron and steel works:		
Number of employees	+ .5	+ 6.7
Number of shifts worked	+ .4	+ 6.7
Engineering trades: Number of employees [1]	+ .03	− .31
Shipbuilding trades: Number of employees [1]	(2)	− .02
Tin plate, steel, and galvanized sheet trades: Number of mills in operation	+ 2.3	+ 1.0
Cotton trade:		
Number of employees	− .9	−11.7
Earnings of employees	+11.4	+12.8
Woolen trade:		
Number of employees	+ .5	− 4.0
Earnings of employees	+ 2.5	+18.6
Worsted trade:		
Number of employees	− .2	− 1.8
Earnings of employees	+ .3	+21.7
Hosiery trade:		
Number of employees	− .3	− 3.5
Earnings of employees	+ 6.6	+23.6
Jute trade:		
Number of employees	− 1.2	− .3
Earnings of employees	+ .8	+24.5
Linen trade:		
Number of employees	+ .5	+ 4.9
Earnings of employees	+ 4.3	+40.8
Silk trade:		
Number of employees	− .4	− 1.8
Earnings of employees	+ 3.3	+23.4
Carpet trade:		
Number of employees	− 1.0	+ 1.7
Earnings of employees	+ 4.7	+22.9
Lace trade:		
Number of employees	− .5	− 5.6
Earnings of employees	+ 3.2	+ 9.8
Bleaching, printing, dyeing, and finishing:		
Number of employees	− .2	− 4.1
Earnings of employees	+ 9.0	+23.3
Boot and shoe trade:		
Number of employees	− .4	− 6.4
Earnings of employees	+ 2.8	+ 9.7
Leather trades: Number of employees	− .5	+ .4
Tailoring trades:		
Number of employees	− .5	+ 3.2
Earnings of employees	+ 2.7	+41.8
Shirt and collar trade:		
Number of employees	+0.3	− 6.7
Earnings of employees	+ .6	+14.0
Other clothing trades:		
Dressmaking and millinery—		
Number of employees	−2.2	− 8.1
Wholesale mantle, costume, blouse, etc.—		
Number of employees—London	−1.7	− 3.5
Number of employees—Manchester	−1.1	− 2.5
Number of employees—Glasgow	−1.8	− 2.1
Corset trade—Number of employees	− .8	− 8.7
Building and construction of works: Number of employees [1]	− .1	+ .3
Sawmilling and machining: Number of employees [1]	(2)	− .1
Brick trade:		
Number of employees	− .6	+ 1.6
Earnings of employees	+ .6	+29.1
Cement trade:		
Number of employees	+ .2	− 6.7
Earnings of employees	+1.5	+16.5
Printing, bookbinding, and paper trades:		
Printing trades—		
Number of employees reported by trade-unions [1]	− .3	(2)
Number of employees reported by employers	+1.1	− 7.3
Earnings of employees reported by employers	+3.8	+ 9.1
Bookbinding trades—		
Number of employees reported by trade-unions [1]	+ .1	+ .2
Number of employees reported by employers	+ .1	− 4.4
Earnings of employees reported by employers	+2.5	+19.4
Paper trades: Number of employees	+ .2	− 2.1
Pottery trades:		
Number of employees	+1.4	− 1.5
Earnings of employees	+4.9	+20.4
Glass trades:		
Number of employees	+ .6	+ .3
Earnings of employees	+6.4	+17.3
Food preparation trades:		
Number of employees	−1.3	−14.9
Earnings of employees	− .7	+ 7.3
Dock and riverside labor: Number of employees	−3.7	−28.3
Seamen: Number of employees	−4.4	−18.1

[1] Based on unemployment returns.

[2] No change.

The table following shows, by occupational groups, the number of individuals registered, the vacancies notified, and the vacancies filled, indicating the extent of unemployment in Great Britain during the four weeks ending December 7, 1917. The totals for this period are also compared with the totals for the four weeks ending November 9, 1917.

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE FOUR WEEKS ENDING DEC. 7, 1917.

A.—Insured trades.

Occupation group.[1]	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Building:										
Carpenters, joiners, etc.	2,980	275	5,707	80	2,005	57	51	3	42	3
Bricklayers	1,669	.....	3,024	1	1,239	1	.....	.....	1	.....
Masons	355	2	117	1	35	1	3	.....	2	.....
Plasterers	536	1	236	.....	134	.....	1	.....	3	.....
Painters, decorators, etc.	2,697	323	1,090	243	885	244	32	27	21	17
Plumbers, glaziers	459	3	579	21	294	19	37	.....	22	.....
Other skilled occupations	82	3	179	3	25	2	14	.....	11	.....
Laborers	6,139	194	6,145	289	4,136	247	133	9	116	6
Works of construction	7,885	22	11,133	8	7,307	3	25	4	20	4
Sawmilling	952	1,395	893	1,175	519	1,139	204	113	170	102
Shipbuilding:										
Platers, riveters	1,180	20	1,147	38	785	37	28	.....	35	.....
Shipwrights	369	.....	533	1	336	1	14	.....	19	.....
Laborers	1,957	326	2,513	122	1,480	109	112	5	98	1
Engineering:										
Molders	925	125	1,015	87	543	77	83	33	60	34
Smiths	605	70	583	67	324	64	32	5	16	5
Erectors, fitters, turners	7,689	1,827	7,515	830	5,816	695	799	49	719	44
Metal machinists	2,771	8,018	1,868	6,371	1,437	6,211	588	253	518	224
Wiremen	616	75	736	73	357	49	67	2	51	4
Other skilled occupations	2,776	6,053	2,395	3,180	1,462	2,917	271	132	245	119
Laborers	9,399	2,341	8,166	2,856	7,071	2,694	460	81	410	72
Construction of vehicles	779	333	502	331	226	333	42	6	34	4
Cabinetmaking, etc.	246	120	170	62	126	41	40	13	17	14
Miscellaneous metal trades	1,631	2,013	2,090	1,050	1,305	968	284	283	268	275
Precious metals, etc.	104	222	124	112	70	97	26	56	27	53
Bricks and cements	50	83	287	121	68	97	13	4	14	4
Chemicals, etc.	688	742	1,068	564	824	527	122	102	111	98
Rubber and waterproof goods	186	914	182	570	160	593	27	41	24	28
Ammunition and explosives	3,335	29,320	2,733	6,654	2,451	8,044	341	342	324	299
Leather, boots, and shoes	208	254	222	146	81	100	39	57	31	41
Leather, excluding boots and shoes	260	486	151	228	88	144	43	73	36	63
Total	59,528	55,561	63,103	25,284	41,589	25,511	3,931	1,693	3,465	1,514
Total, male and female	115,089		88,387		67,100		5,624		4,979	
4 weeks ending Nov. 9, 1917	115,297		93,369		71,243		6,213		5,400	

[1] Occupations are grouped according to the industry with which they are mainly connected, and applicants are registered according to the work desired by them.

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE FOUR WEEKS ENDING DEC. 7, 1917—Concluded.

B.—Uninsured trades.

Occupation group.[1]	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Mining and quarrying	629	33	2,471	15	245	15	48	8	25	6
Textile:										
Cotton	346	845	327	650	155	393	130	109	71	93
Wool and worsted	145	270	245	191	90	134	47	52	29	52
Silk, flax, linen, etc	233	1,707	378	887	118	704	142	377	121	185
Dress:										
Tailors and tailoresses	132	711	92	543	22	358	25	128	23	109
Dressmakers and milliners	.....	470	.....	181	.....	126	.....	186	.....	134
Seamstresses	.....	952	.....	538	.....	440	.....	151	.....	141
Others	74	1,159	36	374	11	358	39	81	22	52
Conveyance of men, goods, etc.:										
On railways	183	255	509	254	330	231	116	4	92	3
On roads, seas, rivers, etc	8,851	2,674	5,847	1,049	4,089	915	2,307	1,199	1,683	876
Agriculture	695	942	682	903	220	730	111	34	62	20
Paper, prints, books, and stationery	144	665	224	450	71	375	213	443	164	356
Wood, furniture, fittings, etc	26	68	33	38	7	35	115	62	106	56
Pottery and glass	87	242	162	119	66	53	102	66	80	34
Food, tobacco, drink, and lodging:										
Bread, biscuit, etc., makers	129	302	161	366	28	317	62	58	38	48
Waiters	104	1,648	55	836	38	681	9	41	8	32
Others (jam, cocoa, tobacco, etc.)	111	1,023	244	278	122	744	86	240	60	202
Brushes, brooms, etc	7	31	17	28	8	19	10	18	7	19
Gas, water, electrical supply, and sanitary service	103	40	889	92	534	93	20	.....	17	.....
Commercial and clerical	3,701	9,829	1,623	3,536	1,094	2,860	861	1,228	653	1,082
Domestic:										
Laundry and washing service	1,426	944	1,088	1,152	596	884	331	110	252	69
Private indoor servants		1,782		2,023		618		259		124
Other indoor servants		7,560		6,045		4,652		288		182
Charwomen, day girls, day servants		11,134		7,311		5,690		1,169		687
Others		324		205		135		25		17
General laborers	11,262	9,567	3,942	972	3,176	961	658	434	562	409
Shop assistants	467	3,020	230	650	67	459	139	615	85	481
Government, defense and professional	1,580	5,076	940	1,368	563	1,073	309	286	245	255
All other	1,376	6,116	691	263	421	231	2,316	720	2,092	635
Total	31,811	69,419	20,877	31,917	12,071	24,284	8,209	8,391	6,497	6,359
Total, males and females	101,230		52,794		36,355		16,600		12,856	
4 weeks ending Nov. 9, 1917	110,447		56,096		38,526		17,458		13,494	
Casual employment (men only)	92		.....		1,665		.....		.....	

[1] Occupations are grouped according to the industry with which they are mainly connected and applicants are registered according to the work desired by them.

This table shows that during the period, in the insured trades, 115,089 adults registered for work—59,528 men and 55,561 women. There were 94,011 vacancies reported—63,103 men, 25,284 women, 3,931 boys, and 1,693 girls. The number of positions filled was 72,079—41,589 men, 25,511 women, 3,465 boys, and 1,514 girls. The occupation groups in which the largest numbers of positions were

filled by adults were: Ammunition and explosives, 10,495; laborers—engineering, 9,765; metal machinists, 7,648; works of construction, 7,310; erectors, fitters, turners—engineering, 6,511; laborers—building, 4,383; and other skilled occupations—engineering, 4,379.

In the uninsured trades there were 101,230 registrations—31,811 men and 69,419 women. The number of vacancies reported was 69,394—20,877 men, 31,917 women, 8,209 boys, and 8,391 girls. The total number of positions filled was 49,211—12,071 men, 24,284 women, 6,497 boys, and 6,359 girls. The occupation groups in the uninsured trades, in which the largest numbers of positions were filled by adults were: Domestic service, 12,575; conveyance of men, goods, etc., 5,565; general laborers, 4,137; commercial and clerical, 3,954.

The total number of positions filled by adults in both the insured and uninsured trades during the four weeks ending December, 7,1917, as compared with the preceding four weeks, shows a decrease of 5.8 per cent. The decrease in the number of positions filled by men was 2.2 per cent; by women 9.3 per cent. Much the largest number of women were employed in the manufacture of ammunition and explosives and in domestic service.

No comparison can be made of the number of registrations in the employment exchanges of Great Britain with the number of applications for work reported by the employment offices of the United States, owing to the difference in method of registering applicants. It is possible, however, to make a comparison of positions filled by the offices in the two countries. The figures show the following result:

	Number of offices.	Positions filled.		
		Total.	Average per day.	Average per day each office.
Great Britain (4 weeks ending Dec. 7, 1917)	385	121,290	5,054	13.1
United States (Nov., 1917)	161	122,610	4,904	30.5

The above figures are significant in view of the fact that a very large percentage, if not practically all, of the employment-office work of Great Britain is done through the free employment exchanges, while in the United States but a very small proportion of the placements is made through the public employment offices, the much greater proportion being handled by the private employment agencies.

WORK OF CALIFORNIA PUBLIC EMPLOYMENT BUREAUS DURING 1917.[1]

For the year ending December 31, 1917, the public employment bureaus of the State of California successfully filled 92,959 positions, according to the report of John P. McLaughlin, commissioner of labor. This is an increase of 100 per cent over the 46,442 placements of 1916, which was the first year of their existence. If we include the additional 45,044 placements in Los Angeles city, the public bureaus of the State have 138,003 placements to their credit for the year just ended.

San Francisco placed 39,795, of whom 3,375 were women and 36,420 were men; 15,557 were sent outside the city and 24,238 went to work in the city proper. Of the women 1,509 were placed in hotels, apartment houses, and restaurants, 998 in private homes, 254 in factories, and 228 in clerical positions. Hotels and restaurants took 8,759 of the men, followed by transportation with 5,615, lumber and timber products with 3,231, agriculture with 1,859, and factories with 1,633.

The Oakland office placed 11,459 men and 2,755 women. Of the women 1,725 went into private homes and 636 into hotels, apartment houses, and restaurants. These same industries took 1,768 men, followed by transportation with 1,289 and agriculture with 587. Oakland, Alameda and Berkeley accounted for 12,291 of the total, the balance of 1,923 going to outside points.

Sacramento's total of 11,313 comprised 10,879 men and 434 women. Of the women 291 went into private homes and 99 into hotels, etc. Agriculture accounted for 3,253 of the men, followed by the lumber industry with 1,557 and transportation with 1,505. Of the total positions furnished 3,079 were in Sacramento and 8,234 were outside the city.

The Fresno office was in operation only a little over four months and placed 6,999 persons, of which number the women constituted 289. Fresno city took 1,895 and the surrounding country 5,104. Agriculture took 171 of the women, hotels 67, and private homes 47. Of the 6,710 men, 3,307 were placed in agriculture, followed by the lumber industry with 668 and building construction with 623.

The State placed 20,638 in the eight southern counties outside of Los Angeles city, and 45,044 more were placed by the city of Los Angeles, with whom the State is cooperating. Of this number 4,050 were placed in agricultural pursuits.

Of the immense total of over 138,003 positions mentioned above, 13,425, or less than 10 per cent, were placed in agricultural pursuits,

[1] This advance summary of the activities of the California public employment bureaus was furnished the Bureau of Labor Statistics by C. B. Sexton, superintendent of bureaus, 933 Mission Street, San Francisco.

where the demand for labor has been greatest. The reason for this is largely because our bureaus have been situated too far from the farming communities to be of much relief to them. By cities, the percentages agricultural are of total placements run as follows: Oakland 4 per cent; San Francisco 5 per cent; Los Angeles 6 per cent; Sacramento 30 per cent, and Fresno 50 per cent. In other words, the nearer we get to the farming community the more assistance we are to them. The need of more offices was repeatedly called attention to, and at the last session of the legislature the labor commissioner asked for an appropriation of $50,000 yearly for the purpose of opening some new branches, but his recommendation was not heeded and a merely nominal increase was given the department. As soon as the extra money was available Gov. Stephens immediately authorized the opening of the Fresno office, which was a great factor in supplying help to harvest the largest raisin-grape crop on record.

Placements in Sacramento and Fresno cost about 40 cents per person, as against an average of $1.80 charged by private fee agencies. Offices at such centers as Stockton, San Jose, and other places in the farming communities of the State, would go a long way toward getting help to put this year's crops in the barns and warehouses. Such offices could be conducted for seven months of the year at a cost of not over $3,000 each, including equipment.

It might be pertinent at this time to once more draw attention to the need of a reduced rate for farm workers who have to travel any appreciable distance. The need will be more urgent than ever this summer, and the chance of the request being granted should be greater on account of the taking over of the railroads by the Federal Government. The farmers, when labor is most needed, have always to compete with employers who offer free or advanced fares. Of the 8,589 men furnished to the transportation companies, all were given free fare, and the fare was advanced to practically all of the 6,099 men taken by the lumber companies, besides hundreds of men furnished to large contractors. Even with an equal offer in wages the farmer is practically in a losing position as against the railroad companies, lumber interests, and contractors in such cases.

EMPLOYMENT IN THE STATE OF NEW YORK.

The following statement regarding the labor market in New York in January is made by the Bureau of Employment of the New York State Industrial Commission under date of February 1, 1918:

The statistics of all the employment offices in the State Bureau of Employment for the past month show that there has been a very slight increase in the work during

the month of January over that of December, 1917. It will be noted that the work of the offices in all lines almost exactly parallels the work done one year ago in the month of January, 1917. During the past month all the registration offices have kept account of the number of people who come to the offices seeking work. The total is a little over 30,000. The 8,000 registrations represent the workers actually handled and sent to positions. For the other 20,000 or more the offices did not have positions, and on account of limited clerical force they were not registered.

There is undoubtedly a considerable amount of unemployment in the State of New York as a whole, due to a number of causes. Some plants are finding difficulty in obtaining raw material, others in obtaining fuel. There has been a decreased demand on the part of the public for articles classed as luxuries. This automatically necessitates a reduction in the force of many plants, and in a few cases to an entire shutdown. It might have been expected that this supply of labor would be absorbed in the various lines of war work. But owing to the fact that many of the war contractors have not yet reached their maximum capacity this supply of labor has not been taken on.

Reports indicate that the five-day closing order did not materially increase the present very large "turnover." This "turnover" still continues and is due to the restlessness occasioned by the reports of labor shortage and high wages, which reports still persist. Alleged shortage often means that certain industries are still calling for highly skilled men in various occupations. This once more strongly emphasizes the necessity for some rational and efficient method of training the less skilled workers for the more highly technical needs.

In spite of the adverse weather the subject of farm help is demanding attention. The State Food Commission should have, just now, some specially organized machinery for the handling of farm help. The work should be carried on through the State Employment Bureau, but will necessitate a very large temporary increase in the present staff of workers. The prospect of securing farm hands seems much brighter than it did a few weeks ago. Among the men laid off for all sorts of reasons are found many who have formerly done farm work, and who now feel that industrial conditions are such as to warrant them in accepting farm wages and the surety of employment. Many have discovered, after spending much time and carfare, that the reported enormous earnings in various lines are really only made by the exceptional few. This supply of farm help just now available is one calling for the quick establishment of machinery for handling it. These men should be registered at once and brought in touch with farmers needing help. A delay of a few weeks will mean that they will probably wander into the fields of industry again opening up as the result of an increased supply of fuel and materials.

The juvenile placement departments are now organized in five offices of the bureau. During the first few weeks the staffs of these departments have mainly devoted their time to getting thoroughly acquainted with the industries and openings in their different communities. They have, however, already commenced their actual work. As has been stated before, these departments are trying to avoid making a record of placements. Reports received indicate that they are spending more time in getting children to return to school and in giving vocational advice than in making actual placements. There is a strong call for this intensive work of pointing out to young people the need of further schooling or the need of taking up special lines of training.

Regarding manufacturing activity in New York the Industrial Commission states that in December, 1917, as compared with the preceding month there were increases of almost one-half per cent in both the number of employees and the amount of wages paid, and a

new high record for wages was established. As compared with the same month in 1916 there was an almost imperceptible decrease in the number of employees in December, 1917, and a 14 per cent increase in the pay roll. A comparison of December, 1917, with December, 1915, shows increases of 13 per cent in the number of workers and 48 per cent in the total amount of wages paid to them. Since December, 1914, there was in December, 1917, an increase of 32 per cent in the number of employees and 87 per cent in the volume of wages. The leather, the metals and machinery, and the textiles groups showed the greatest increases in activity in December as compared with November.

OPERATIONS OF THE LABOR EXCHANGE SYSTEM OF NEW SOUTH WALES, 1916–17.

In the December issue of the New South Wales Industrial Gazette (pp. 776 to 786) there is a report of the operations of the labor exchange system for the financial year ending June 30, 1917, in which the record of the year's activities is first set forth, followed by a statement of the amalgamation of the State labor branch and the central labor exchange as the result of the "far-reaching plan of reorganization in this section of departmental work," which was found to be essential to meet "an industrial problem of serious dimensions" brought about by the suspension of great public works, and the partial collapse of the building industry and corresponding war effects upon a great range of individual enterprises. Mention is also made of the establishment of a daily news list, showing the work available, and the labor offerings at and through the exchanges for the information of employers and employees, respectively, under the title of the "Labor Exchange Daily Supplement to the New South Wales Industrial Gazette."

While no statistics are given showing the occupations included in the placements, it is stated that the labor exchanges applied themselves with great zest to the satisfaction of farmers' needs in connection with the 1916 harvest, and it may be assumed that a large proportion of the male labor was sent to the farms to work. The persons placed in employment by the State labor branch and the State labor exchange numbered 14,944, of whom the women's employment agency placed 3,578 (23.9 per cent), although it is not stated that women were not placed by other agencies. The total number placed was 69.2 per cent of the number of applications received from employers and 57.4 per cent of the number of applications received from employees.

A practice is made of assisting workers to the place of their employment by advances in varying amounts for traveling expenses, and during the year 4,236, or 27 per cent of those placed, availed themselves of this privilege, the total amount of the advances being £4,897 4s. 3d. ($23,832.28), representing £1 3s. 1d. ($5.62) per person assisted. The arrears of repayments due up to the end of the year amounted to £320 0s. 8d. ($1,557.44), or 1s. 6d. (36.5 cents) per person. These advances have been limited to £2 ($9.73) per person, but during the year direction was given to labor exchanges to extend this limit if necessary in order to facilitate the transfer of employees' families to the location in which work was available. Furthermore, exchanges were permitted to make an advance not to exceed £1 ($4.87) per person, in addition to the amount advanced for fares, to meet expenses during that part of the journey which remains after an applicant reaches a railroad terminus or a railroad station or port of disembarkation nearest to his place of employment.

The report notes several matters of policy which were determined during the year, which may be suggested briefly.

The exchanges are at liberty to treat applications for employment from residents outside the State in the same manner as they treat applications for employment from residents of New South Wales, "provided that in the first place the persons to be assisted were white Australians or white New Zealanders, and in the second place that applicants for employment within the State should be able to supply a certificate indicating that the condition of their health was not likely to be a menace to the health of the people of this State, or to leave them dependent upon local charity."

Upon the question of registration a direction was issued during the year that every applicant for employment registered with the exchanges must be treated as a person available for employment unless his record with the exchange discloses otherwise at any future time.

Exchange officers were directed that they should take pains to see that the employees sent to employment were capable of satisfactorily discharging the duties which their employment would require from them, the feeling being that no system, however theoretically perfect, could succeed if the practical value of the person sent to employment was not responsibly ascertained and to some extent guaranteed.

The question of giving preference of employment to married men was determined by the minister of labor to be an unwise procedure, the view being expressed that those who preferred the request seemed to overlook the fact that the departmental labor exchanges

selected labor only in a secondary sense; that the character of labor required by employers who resorted to the exchanges was generally indicated with some particularity; that skilled workers of almost any class in mechanical trades were then difficult to find; and that the claims of unionists to preference of employment could not well be resisted by employers or the labor exchanges.

It is part of the plan of the labor-exchange system to preserve a record of the character and industrial ability of each person assisted. The purpose of the record is to make it possible for the exchanges to give assurances, based on the individual history preserved by them, as to the probity and efficiency of the persons sent by them to employment.

A question raised as to whether the exchanges should be made available to men who from their age, physical ability, and other conditions were deemed to be persons who should volunteer for military service was considered by the minister, who issued an instruction that exchange services should not be refused to any registered applicant for employment, subject always to the continuance of the departmental policy by which the patriotic obligations of persons who might be expected to enlist were to be brought vividly to their minds.

LABOR ORGANIZATIONS.

TWENTY-FIRST ANNUAL CONVENTION OF THE INTERNATIONAL SEAMEN'S UNION OF AMERICA.

The keynote of the Twenty-first Annual Convention of the International Seamen's Union of America, held at Buffalo, December 3 to 12, 1917, inclusive, was sounded in the call "to all seafaring men ashore or afloat," embodied in resolution No. 20 adopted unanimously by the convention:

The Nation that proclaimed your freedom now needs your services. America is at war. Our troops are being transported over the seas. Munitions and supplies are being shipped in ever increasing quantities to our armies in Europe. The bases are the ports of America. The battle fields are in Europe. The sea intervenes. Over it the men of the sea must sail the supply ships. A great emergency fleet is now being built. Thousands of skilled seamen, seafaring men of all capacities, who left the sea in years gone by as a protest against the serfdom from which no flag then offered relief, have now an opportunity to return to their former calling, sail as free men, and serve our country.

Your old shipmates—men who remained with the ship to win the new status for our craft—now call upon you to again stand by for duty. Your help is needed to prove that no enemy on the seas can stop the ships of the Nation whose seamen bear the responsibility of liberty.

America has the right, a far greater right than any other nation, to call upon the seamen of all the world for service. By responding to this call now you can demonstrate your practical appreciation of freedom won.

* * * We must be prepared, * * * to man the great new merchant fleet now building. Men must be ready and in training. It is in recognition of this need that we, as a duty to the Nation, submit this call to all seamen.

The Seamen's Union, which operates in three great divisions, the Pacific, Atlantic, and Lake districts, comprises a membership of about 38,000. In his report, the secretary treasurer points out the great gain in membership, increasing financial strength, marked increase in wages, and general improvement of working conditions. The report points particularly to the Eastern and Gulf Sailors' Association, which has added nearly 2,000 to its membership; to the Marine, Firemen, Oilers, and Water Tenders' Union of the Atlantic and the Gulf, which has "made greater gains during the past year than any other district union in the International," and to the Marine Cooks and Stewards' Association of the Atlantic, which has obtained wage increases ranging from 25 per cent for the most skilled men to 100 per cent for men of lesser experience, with an additional bonus of 50 per cent for men going into the war zone. Material improve-

ments in working conditions, overtime pay, and increases in wages are reported for the Maritime Union of the Pacific District, and it is further stated that the "progress made in organizing and improving conditions of men in the various fishing industries of the Pacific coast exceeded our expectations." It is reported that the Lake Seamen's Union has, "through skillful maneuvering" been able to "establish a wage scale far in excess of that contemplated by the Lake shipowners."

The year closed marked the inauguration of a number of important agreements between the union, shipowners, and the United States Shipping Board. The Atlantic agreement of May, 1917, entered into between the Union of Sailors, Firemen, and Cooks of the Atlantic District, shipowners of the Atlantic coast, and the United States Shipping Board, and approved by the Secretaries of Labor and of Commerce, is considered by the union to be the most important feature of the progress made by the seamen of America during the past year. This agreement as finally ratified on August 8, 1917, is as follows:

Substantially all the steamship lines will agree to pay the following wages: Sailors and firemen, $60 per month; coal passers, $50 per month; oilers and water tenders, $65 per month; boatswains, $70 per month; carpenters, $75 per month; overtime pay for cargo work, 50 cents; for ship work, 40 cents per hour. Bonus going to the war zone 50 per cent of the wages, wages and bonus to continue until crew arrived back in the United States; $100 compensation for loss of effects caused by war conditions. The scale of wages and bonus for cooks and stewards at present in force be maintained and continued during the continuance of this agreement.

That a certain number of boys determined by the number of men carried are to be employed in addition to the usual crew; that a number of ordinary seamen will be employed in proportion to the able seamen carried. Taken as an instance, a vessel now carrying 8 men on deck, will carry 6 able seamen, 2 ordinary seamen, and 2 boys, such boys and ordinary seamen to have ample opportunity to learn the work usually demanded of able seamen.

That the representatives of the organized seamen shall have access to and be permitted on docks and vessels during reasonable hours.

The representatives of the seamen tentatively agreed to join with the shipowners in an appeal to seamen now employed on shore to come back to the sea.

That the bonus and other conditions arising from the War shall terminate with the War, and that the wages set shall remain for one year to the end that wages be stabilized, and that the new men now on shore may be induced to return to the sea.

That the seamen will use earnest efforts in cooperation with the officers to teach seamenship to the boys and ordinary seamen.

The secretary treasurer recounts the plans of the Lake Seamen's Union during the past season, which included a movement for a wage increase and the abolition of the discharge-book feature of the employment system of the Lake Carriers' Association. The report states that because of the unwillingness of the Lake Carriers' Association to give up this feature of its employment system, the Lake Sea-

men's Union called a strike, which, while not actually carried out, led to a series of conferences between representatives of the seamen, the Lake Carriers' Association, and the United States Shipping Board, resulting in the establishment of a minimum-wage schedule for seamen on the Great Lakes, effective from October 1, 1917, to the close of the season, and brought about the abolition of the continuous-discharge-book system by the United States Shipping Board.

The president's report deals chiefly with his efforts to "watch legislation and general developments, * * * to defend such part of the Seamen's Act as might be attacked in the courts, to assist foreign seamen as well as members of our own organization in obtaining the benefit of the act."

Among the resolutions adopted by the convention, the subject matter of a few of the more important ones may be mentioned:

Resolution No. 2 favors a conference of all the seamen of the world, immediately upon the termination of the War, for the purpose of initiating measures deemed essential for the elimination of dissension and hatred among seamen.

Resolution No. 6 urges the Department of Commerce to have a ruling amended which makes possible the working of the crew in the engine and fire room for eight consecutive hours, which is believed to be in violation of the spirit and intention of the Seamen's Act.

Resolution No. 7 instructs the legislative committee of the union to further the passage of a bill pending in Congress designed to increase the salaries of employees of the Steamboat Inspection Service.

Resolution No. 9 points out that because of the hazardous employment in which seamen are engaged, a reduction in their hours of labor is fully warranted and favors the establishment of an eight-hour workday for all seamen.

Resolution No. 16 asks for the enactment of a law by Congress which would make it compulsory that all lake ships carry an emergency nonperishable food supply for emergency use only.

Resolution No. 19 requests that a system of training be started immediately for merchant seamen on a large scale, and that the recruiting service of the United States Shipping Board have absolute control over the recruiting and training of such seamen. As a means of more effectively carrying out this policy, a series of recommendations accompany this resolution urged for adoption by the United States Shipping Board.

The committee on legislation urges the enactment of a general Federal compensation law for all seamen, in view of the fact that there is no general law in the United States providing definite compensation for injuries received by seamen on board the vessel or in the service of the vessel.

The next convention will meet at Galveston, Tex., on the third Monday in January, 1919.

INTERNATIONAL TRADE-UNION CONFERENCE IN BERNE, OCTOBER 1 TO 4, 1917.[1]

In accordance with the resolution of the preliminary conference in Stockholm on June 8, 1917, the conference of the International Federation of Trade-unions was held in Berne, Switzerland, on October 1 to 4. Originally it was proposed that the conference should meet on September 17, but in deference to the wish of the Swiss Federation, which had undertaken the organization of the conference, the date of convocation was postponed to October 1 in order to make it possible for representatives of all affiliated national federations to attend. The national organizations of Great Britain, the United States, and Belgium declined, however, to participate in the conference. The reason given by the American Federation of Labor was that at the present time a conference would not lead to any results. Belgium declined the invitation without stating any reason for doing so, and the British Federation of Trade-unions, in a letter, declined to meet in conference representatives of the German working classes. Italy and Spain sent no reply. The French Federation had announced that it would participate, but later sent a telegram, which arrived on the second day of the conference, stating that the French delegates had been refused passports by their Government.

The countries represented at the conference and the number of delegates from each were as follows: Bulgaria, 2; Denmark, 3; Germany, 10; Holland, 8; Norway, 2; Austria, 5; Sweden, 5; Switzerland, 11; and Hungary, 10. In addition there were 5 delegates of the Czecho-Slavic trade-unions of Bohemia, which are not affiliated with the International Federation. These delegates were admitted to the conference with the understanding that in questions relating to organization of the Federation they, like the Bulgarian delegates whose organization also is not at present affiliated with the federation, should have no vote.

The program of the conference was limited to the question of the transfer of the headquarters and reorganization of the International Federation and to the peace demands of the trade-unions. The conference resolved to appoint two committees for the preliminary discussion of these two questions. One representative of each affiliated national organization was elected to the committee for the preliminary discussion of the transfer of headquarters. The second committee, charged with the discussion of the peace demands, was composed of 10 members; i. e., of one representative of each delegation present at the conference.

The first two days of the conference were spent in the reading of letters and telegrams received from national organizations which had

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 41, No. 27. Berlin, Oct. 13, 1917.

declined to attend the conference or were prevented from attending it. After a spirited debate in which these declinations were criticized, the conference adopted the following resolution:

The international conference greatly regrets that the representatives of the French trade-unions were prevented by their Government from coming to Berne.

The conference acknowledges receipt of the letter of the British General Federation in which the reasons for its failure to send delegates are given. This declination of the invitation to participate in the conference is incomprehensible to the conference because it is inconsistent with the endeavors and objects of the international labor and trade-union movement. The conference does not consider itself competent to sit in judgment on the question of the guilt of the nations and of their governments in the present War, and therefore must disregard the letter of the British General Federation and pass to the order of the day, expressing the sincere wish that in all countries the leaders and masses of the organized proletariat may with all means at their disposal work for an early conclusion of peace.

On the third day of the conference the committee for preliminary discussion of the transfer of headquarters submitted the result of its discussions. J. A. Hansen (Denmark), the spokesman of the committee, stated that the committee had arrived at the decision that "under the present circumstances transfer of the headquarters of the International Federation should not be made, because the conference is not a full conference. As the original movers of the transfer are not present, nothing would be gained by deciding this question at present, because there is no guaranty that the absent national organizations would be willing to abide by such a decision. It should, moreover, be stated explicitly that so far nobody has complained about the business management of the headquarters by the Germans."

During the subsequent long debate only the representatives of Switzerland were in favor of a transfer of headquarters, while the Hungarian representatives recommended a transfer of the secretariat to Switzerland for the duration of the War. Representatives of the Dutch and German delegations spoke against such an arrangement. When the matter came to a vote the conference approved the findings of the committee and with the Swiss delegation dissenting adopted the following resolution:

The conference is not necessarily opposed to settling of the question of the transfer of the secretariat. The circumstances, however, under which the transfer of the headquarters of the International Federation of Trade-unions has been requested, as well as the absence of the original movers of this transfer, cause the conference to defer decision of such an important question of organization and to submit it to the next conference.

In order, however, to maintain international connection among the national organizations affiliated with the federation, the conference confirms the branch office in Amsterdam and charges it with the continuance and expansion of its present intermediary activities. The conference further expects that the national organization will make the utmost efforts to the end that the differences prevailing to-day, which were only caused by the War, may be removed at the earliest possible date and unity be restored.

On the last day of the conference this resolution was supplemented by the following declaration made by the German delegation:

The representatives of the German trade-unions declare that their refusal to consent to-day to a transfer of the secretariat should not be taken to mean that they intend to keep the headquarters of the International Federation of Trade-unions in Germany under all circumstances. They are forced into their present attitude because the British trade-unions in particular have remarked that the transfer of the secretariat would be equivalent to an expression of distrust of Germany. The International Federation can be maintained only if all the national federations have complete confidence in each other. As soon as all national federations will agree to take part in a conference they will find the German trade-unions ready to discuss in an orderly manner the transfer of the secretariat of the International Federation.

The discussion of the peace demands of the International Federation showed again the complete unity of purpose of the trade-unions represented at the conference in all matters relating directly to the safeguarding of the interests of labor. After having examined the various proposals submitted and the resolutions of the Leeds conference, the committee finally adopted, with a few minor changes, the program of the international secretariat. The spokesman of the committee emphasized that, "although several proposals made by members of the committee were withdrawn or not incorporated by the committee in its program, it should not be concluded that the committee was opposed to these proposals. The committee, however, did not consider it suitable to burden the peace program, which is the international program of the trade-unions, with demands going far beyond what can actually be realized within the individual national spheres. The committee was, for instance, forced to decline a proposal of the Swiss delegates for the immediate adoption of the eight-hour-day principle and to accept in its place the Leeds conference proposal that the 10-hour day be adopted as the international maximum working day. This decision was based on the fact that a large number of countries which have no regulation at all as to hours of labor will be parties to the peace agreement. Adoption of the 10-hour day will mean a great progress for them, and this progress will also benefit countries with shorter hours of labor. A similar situation existed with respect to various other proposals which at present can not be realized internationally. The committee, therefore, decided in favor of a minimum program which contains only such demands as have been generally agreed upon by social economists as essential and which have been practically applied in individual countries. Demands for protective legislation for special trades must be deferred until the conference succeeds in creating an internationally recognized agency for the preparation and promotion of matters connected with such legislation. An exception was made by the committee with respect to protection of seamen, because this

international trade requires special acknowledgment. Otherwise the committee's program has been limited to problems of general protective labor legislation such as freedom of travel, right of coalition, social insurance, hours of labor, hygiene, accident prevention, home industry, protection of juvenile and female workers, and the enforcement of labor laws."

The spokesman of the committee then enlarged upon the necessity of energetic promotion of protective labor legislation through the peace treaty, as follows: "The national strength of the European countries has been diminished to such an extent that only extraordinary measures can rehabilitate it. In addition to the loss of millions of men, killed and crippled, the health of those who have survived, unwounded, the hardships, privations, and dangers of the War, has also been impaired. They will feel the physical consequences of the War all their lives and their working capacity will be reduced. Then there must also be considered the weakening of those who while staying at home have in unceasing work and with scanty nourishment expended their best energies. All this applies to all the belligerent European countries, and with respect to conditions of nutrition the neutral countries of Europe are also having great difficulties, the consequences of which are felt most by the working classes. Only socio-political measures on a large scale can help in overcoming the consequences of the War. In order to facilitate such measures certain minimum demands must be established by international action, and action of this kind must be taken in the peace treaty. The peace program submitted by the secretariat and adopted and supplemented by the committee takes into account this fact, the essentials of which are also embodied in the peace program of the Leeds conference. In adopting this program the conference admonishes the nations to acknowledge protective labor legislation as national protective legislation and to develop it as such."

The peace program advocated by the committee was as follows:

I. FREEDOM OF TRAVEL.

(*a*) The enactment of prohibitions of emigration shall not be permissible.

(*b*) The enactment of general prohibitions of immigration shall not be permissible. This provision shall not affect—

1. The right of each State to order temporary restrictions of immigration in times of economic depression in order to protect native labor as well as alien immigrant labor.

2. The right of each State to control and temporarily restrict immigration in order to protect the national health.

3. The right of each State to stipulate minimum requirements as to the ability of immigrants to read and write their mother tongue in order to protect its national culture and in the interest of efficient enforcement of the protective labor laws relating to industries in the branches of which immigrant labor is being prevailingly employed.

(*c*) The signatory States shall obligate themselves to incorporate in their legislation at the earliest possible date provisions which prohibit the hiring of contract labor from abroad and the activities for the same purpose of employment bureaus operated for profit.

(*d*) The signatory States shall obligate themselves to compile labor-market statistics from organized public employment offices and to interchange these statistics at the shortest possible intervals through an international central bureau, in order to prevent migration of labor to countries in which the chances for employment are small. These statistical reports shall be made accessible to labor organizations in particular.

II. RIGHT OF COALITION.

(*a*) The right of free coalition shall be granted in all countries to workmen. Laws and decrees (domestic-servant laws, prohibitions of coalition, etc.) which differentiate between individual classes of workmen or deprive them of the right of coalition and of representation of their economic interests shall be abrogated. Immigrant labor shall enjoy the same rights as native labor with respect to participation and activity in trade-union organizations, including the right to strike.

(*b*) Interference with workmen in the exercise of the right of coalition shall be made punishable.

(*c*) Alien workmen shall have the benefit of those wage and labor conditions which have been agreed upon by trade-union organizations with the employers of their trade. Where such agreements do not exist the prevailing wage rate of their trade in the locality shall be applicable to alien workmen.

III. SOCIAL INSURANCE.

(*a*) Countries which so far have not introduced insurance against sickness, industrial accidents, invalidity, old age, and unemployment shall obligate themselves to introduce such insurance at the earliest possible date.

(*b*) Immigrant workmen shall without consideration of the probable duration of their sojourn in the foreign country have the same status as to rights and duties in all branches of social insurance as native workmen.

(*c*) Workmen temporarily employed outside of their country (on assembling of machinery, etc.), as well as transportation workers (seamen, etc.) who usually work within the territory of several States shall be subject to insurance in that State in which the enterprise employing them is located.

(*d*) All documents and certificates relating to social insurance shall be executed without charge and be exempt from fiscal dues.

(*e*) Alien workmen who have departed from the country in which they have a legal claim to pension shall not lose their claims provided their own country has acknowledged the principle of reciprocity. Detailed provisions as to this question as well as to the mode of payment of the pensions and the regulation of the control of the pensioners shall be made in international treaties.

(*f*) These treaties shall also regulate whether trade diseases shall be considered as industrial accidents.

(*g*) Claims on the unemployment insurance of a country become extinct on departure from the country in which the claims have been acquired. Whether claimants shall be granted a travel subsidy is to be regulated by treaty.

IV. HOURS OF LABOR.

(*a*) The daily hours of labor for all workmen may not exceed 10 hours. The signatory States shall obligate themselves to issue legal regulations, according to which the daily hours of labor shall at fixed intervals be reduced in such a manner that after

a time limit to be fixed by agreement the eight-hour workday shall generally become the maximum legal workday.

(*b*) The hours of labor in mines, establishments with continuous operation, and in industries especially injurious to the health of the workmen shall be reduced to a maximum of 8 hours per day.

(*c*) Nightwork between 8 p. m. and 6 a. m. shall be legally prohibited for all establishments in which nightwork is not made necessary by the nature of their operation or for technical reasons. In establishments in which nightwork is permitted the hours of labor shall not exceed 8 hours per shift.

(*d*) All workmen shall be granted by law a weekly continuous rest period of at least 36 hours during the period from Saturday to Monday. Exceptions from this Sunday rest may be made only for the performance of labor required for the resumption of operation on Monday, for establishments which for technical reasons must be operated continuously, and for those activities which serve for the recreation and education of the people on Sunday. In all of these cases a 36-hour continuous rest period must be granted on week days. Exceptions are to be designated precisely in the law. In order to assure a 36-hour continuous weekly rest period establishments with continuous operation shall organize reserve shifts. The changing of shifts is to be so regulated that each workman is off duty at least every third Sunday.

(*e*) Those establishments whose processes are especially injurious to the health of workmen shall in each country be precisely designated by decree or law.

V. HYGIENE.

(*a*) The signatory Governments shall obligate themselves to promote in their countries the development of legislation on industrial hygiene. In particular endeavor shall be made to achieve uniformity of hygiene regulations for the individual industries, and to further a continuous common effort against the use of industrial poisons and particularly dangerous methods of production.

(*b*) In the work in the field of occupational hygiene designated under (*a*), the list of industrial poisons compiled by the International Association for Labor Legislation shall be used. Such poisons as can be replaced by less dangerous substances or materials shall be excluded from use in industrial establishments.

(*c*) Special regulations as to maximum hours of labor shall be agreed upon for the establishments designated under IV (*e*), having regard to the extent of occupational danger connected with the individual branches of industry.

VI. HOME WORK.

(*a*) All laws and decrees relating to the protection of labor shall be applicable to home work.

(*b*) Social insurance shall be extended to home workers.

(*c*) Home work shall be prohibited—

1. In the case of all work which may involve serious injuries to the health of the workmen, or their poisoning.

2. In the food, beverage, tobacco, etc., industries.

(*d*) It shall be made obligatory for home workers to notify the authorities whenever they are afflicted with an infectious disease.

(*e*) Medical inspection of juvenile home workers, analogous to inspection of school children, is to be introduced in all countries.

(*f*) The keeping and inspection of lists of all workers and intermediary undertakers (subcontractors) in home industry, as well as the keeping of wage books for all home workers, shall be made obligatory.

(*g*) Equipartisan wage boards shall be established in all districts having home industries and shall determine legally binding wage rates. Lists showing the wage rates shall be posted in the workrooms.

VII. PROTECTION OF CHILD AND JUVENILE LABOR.

(*a*) Children under 15 years of age shall be prohibited from exercising any gainful occupation.

(*b*) Juvenile workers 15 to 18 years of age may not be employed longer than 8 hours per day and must be granted 1½ hours' rest after 4 hours of continuous labor. Provision shall be made for the instruction of male and female juvenile workers in continuation and trade schools, the hours of instruction to fall between 8 a. m. and 6 p. m. Juvenile workers must be granted time to attend these schools.

(*c*) The employment of juvenile workers shall be prohibited—

Between 8 p. m. and 6 a. m., and on Sundays and holidays; in establishments particularly injurious to the health; in mines on underground labor.

VIII. PROTECTION OF FEMALE LABOR.

(*a*) The hours of labor of all female workers and salaried employees in large and small industrial establishments, trades, commerce, transportation, and public traffic, as well as in home industries, shall be limited to 8 hours per day and 44 hours per week. On Saturdays the hours of labor shall terminate at noon (12 o'clock) so that such female workers and salaried employees shall be assured a continuous rest of at least 42 hours until Monday morning. Employment of female workers during the time between 8 p. m. and 6 a. m. shall be prohibited.

(*b*) Undertakers (entrepreneurs) shall be prohibited from giving female workers and employees work to take home to be done after termination of the hours of labor.

(*c*) The employment of female workers in industries particularly injurious to the health (IV (*e*)) and in mines both above and below ground shall be generally prohibited.

(*d*) Before and after confinement women may not be employed in industry for a total period of 10 weeks, of which at least 6 weeks must fall in the time after confinement. The introduction of maternity insurance with a minimum benefit equivalent to the legal sick benefit shall be made obligatory for all States.

IX. ENFORCEMENT OF PROTECTIVE LABOR LEGISLATION.

(*a*) An efficient industrial inspection service for large and small industrial establishments, trades, home industries, commerce, and transportation, as well as for agricultural establishments using machinery, shall be organized and developed in all countries.

(*b*) The officers of the inspection service shall be appointed from among technical experts, as well as from among workmen and salaried employees. Their number shall be sufficiently large to insure the inspection of each establishment at least once every half year. The officers of the inspection service shall be granted executive power and be compensated adequately so as to insure their independence. Women shall be employed as inspection officers for the enforcement of the provisions relating to female labor.

(*c*) Trade-unions organized by virtue of the right of coalition, which is to be granted in all countries, shall cooperate in the efficient enforcement of protective labor legislation. Trade-unions shall in particular be obligated to aid the industrial inspection officers through their committees, secretariats, etc.

(*d*) In order to assure enforcement of protective labor legislation, owners of establishments with at least five workmen speaking only a foreign language shall be legally obligated to establish at their own expense and under supervision of the educational authorities courses of instruction in which the immigrant workmen may learn the language of the country.

(*e*) The International Association for Labor Legislation shall explicitly be recognized in the peace treaty as the medium for the promotion and enforcement of international protective labor legislation. The International Labor Office maintained by this association shall collect and publish in the three principal languages all socio-political material, such as statistics, social insurance and labor laws, important decrees and orders, etc., supervise the enforcement of socio-political agreements incorporated in international treaties, remain in constant communication with the central labor offices or Government departments charged with the duties of labor offices, prepare on request opinions on various matters relating to socio-political legislation, undertake the preparation and direction of international investigations in this field, and make studies of everything relating to the development and application of social legislation. The International Labor Office shall in particular act as intermediary in the quick exchange of labor market statistics (I (*d*)) among the various countries.

(*f*) The International Federation of Trade-unions shall be granted representation in the International Labor Office.

(*g*) The International Labor Office shall periodically convoke international congresses for the promotion of labor and social legislation to which the signatory States shall send official representatives. The signatory Governments shall bind themselves to aid in the realization of the resolutions of these congresses.

(*h*) The costs of maintenance of this office shall be borne by the signatory States.

The program as to peace demands submitted by the committee was unanimously adopted by the conference, as was also the following resolution submitted by a German representative:

In connection with the adoption of a program as to peace demands the International Conference of Trade-unions addresses to the representatives of the trade-unions and of labor of all countries the urgent appeal to work with all means at their disposal for the recognition and realization of these demands of labor. All national central organizations of trade-unions shall obligate themselves to submit to their Governments at the earliest possible date the demands formulated by the conference and to induce them to support at the peace negotiations the acceptance of the international demands of labor. The conference demands and expects from the Governments of all countries participating in the peace negotiations the admission of representatives of the trade-unions of each country to the discussion and determination of the social-economic part of the peace conditions.

After the adoption of this resolution the conference was closed by its president. On October 7, three days after the close of the conference, the Swiss Federation of Trade-unions received a telegram dated October 2, which announced that the Italian delegation had been prevented from attendance by the refusal of the Italian Government to issue passports to the members of the delegation. A communication was also received in which the Finnish trade-unions expressed their regret at being prevented by transportation difficulties from attending the conference.

SEVENTH CONGRESS OF THE SWEDISH TRADE-UNIONS.[1]

The seventh congress of the National Organization of Swedish Trade-unions took place in Stockholm in the week August 20-25, 1917. In addition to the representatives of the central organization 310 representatives of affiliated federations attended the congress. The trade-unions of Denmark, Norway, Finland, and Germany also sent representatives.

During the preceding congress (in 1912) the after effects of the great general strike of 1909 had not yet been overcome, but the downward movement of the membership had reached its lowest point with 83,000 members. Since then there has been a considerable change for the better. The continuously increasing cost of living since the outbreak of the world war has forced the working classes in Sweden as in all other countries to try to obtain wage increases with the aid of the trade-unions. For this reason the membership of the trade-unions increased as greatly as in the years before the general strike of 1909. While on January 1, 1912, the federations affiliated with the central organization had only 80,707 members, on January 1, 1917, the membership had risen to 140,802, and during 1917 the membership continued to increase so that in August 169,000 members were represented at the congress.

The published annual report of the central organization, which at the congress was supplemented by remarks of Herman Lindquist, points out this favorable development of the trade-union movement and contains numerous statistical tables of wage movements which indicate the intensive activity of the individual federations in the interest of their members. Most wage movements had the object of obtaining wage increases on the occasion of renewals of collective agreements. In addition to increased wages the federations in many instances endeavored to obtain high-cost-of-living bonuses. The extensiveness of the wage movements in Sweden during 1916 is shown by the fact that a total of 1,001 movements covering 5,698 employers and 114,872 workmen is reported for the year. The report states that on the outbreak of the war wage movements and strikes were discontinued in Sweden. The mobilization disorganized for some time all industrial activity. Extensive unemployment was the consequence, and employers made attempts to depress wages. All such attempts were, however, frustrated by the trade-unions. Conditions improved slowly but steadily and the panic of 1914 was succeeded by the most intensive industrial activity and general prosperity.

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 27, No. 38. Berlin, Sept. 22, 1917.

The finances of the Swedish trade-unions show a very favorable development during the five-year period ending January 1, 1917. On January 1, 1912, the capital of 30 federations was 1,185,671 crowns ($317,759.83) or 11.63 crowns ($3.12) per member, while on January 1, 1917, it had increased to 4,451,728 crowns ($1,193,063.10) or 28.84 crowns ($7.73) per member.

The split within the Swedish Social-Democratic Party was greatly in evidence at the congress. A motion to invite the participation of the new Social-Democratic "Independent" Party received a large negative vote. The old dispute as to the political attitude of the trade-unions was revived. Several motions made at the congress demanded separation of the trade-union organization from the Social-Democratic Party. A vote on the question resulted in a victory for the central organization which supported adherence to the party.

Discussion of the problem of syndicalism took up considerable time of the congress. The discussion related less to the nature of syndicalism than to the question as to whether members of trade-unions should jointly and separately oppose syndicalistic strikes. The discussion was ended by the adoption of a resolution which provided that the by-laws of the national central organization and of the national federations shall be binding on the members as to their attitude toward strikes in which they are not personally interested. This resolution refers to all strikes and not only syndicalistic strikes.

A resolution of the congress provided for promotion of local trade-union councils and the granting of subsidies to them by the national central organization. Another resolution set aside 10,000 crowns ($2,680) for propaganda among rural workers. Creation of an official organ of the central organization was unfavorably voted on by the congess on account of lack of funds. The congress adopted two important resolutions relating to amendment of the by-laws of the central organization. The first of these resolutions amends the right of representation at general conferences of trade-union directorates by providing that federations with less than 10,000 members shall be allowed to send one representative, those with 10,000 to 20,000 members two representatives, and for each additional 20,000 members or fraction thereof one more representative. The second resolution restricted the representation at future congresses to 250 delegates to be elected by the federations on the basis of their membership.

WORKMEN'S COMPENSATION.

WORKMEN'S COMPENSATION AND ACCIDENT INSURANCE IN MARYLAND.

The third annual report of the State Industrial Accident Commission of Maryland,[1] covering the year ending October 31, 1917, states that in the administration of the workmen's compensation law, covering 11,010 employers engaged in extrahazardous employments, the commission received reports of 37,434 accidents (an increase of 19.5 per cent over the preceding year), 32,329 of which carried first aid and subsequent medical treatment at a cost to the insurers of $98,602.68. The accidents in these cases, it appears, did not cause disability beyond the waiting period of two weeks and therefore did not carry weekly compensation. However, in 4,677 cases weekly compensation and also medical and other treatment were awarded. The report further states that during the year there were paid to beneficiaries under the act $591,211.06, and that there remained outstanding at the end of the year $279,715.36 to be paid in the future on awards made during the year in fatal cases and cases of permanent disability in which specific awards could be made, besides a large number of outstanding claims for temporary disability cases, the aggregate amount of which can not be given. A plea is made by the commission for a larger annual appropriation than the $55,000 now allotted by the State.

The report states that there were filed during the year 5,117 claims, of which 12 were duplicates, leaving 5,105 claims for compensation, of which 131 were for fatal cases. Awards were made in 4,677 cases, as already noted, the distribution of benefits being indicated in the following statement taken from the report:

	Amounts awarded.
102 awards in fatal cases	$244,354.83
398 awards in cases of permanent partial disability	119,618.19
Total awarded in specific awards	363,973.02

To this must be added the cumulative amount awarded for cases of temporary total disability, which run during the continuance of disability and therefore can not be definitely estimated in advance, in order to measure the benefits which the operation of the law has effected during the year.

[1] Third annual report of the State Industrial Accident Commission of Maryland for the year Nov. 1, 1916, to Oct. 31, 1917. Baltimore [1918]. 52 pp.

Amounts paid during the year to beneficiaries in compensation, medical, and other expenses.[1]

Permanent partial	$53,815.86	
Temporary total	361,664.83	
Fatal	30,461.60	
Medical expense	40,439.84	
Funeral expense	6,226.25	
Total in claim cases		$492,608.38
Reported medical in accident cases in which there was no claim		98,602.68
Total benefits paid		591,211.06
Outstanding to be paid in the future on awards made during the year in—		
Fatal cases		243,913.23
Permanent partial cases		65,802.13
Total		870,926.42

Some general facts connected with the awards may be noted, the numbers and percentages in each case being the largest in the particular group considered: "Falls of persons" was the cause of injury or death in 937 cases (18.4 per cent); 1,503 (29.4 per cent) cases involved cuts and lacerations; most of the awards, 2,345, or 45.9 per cent, were made to laborers both skilled and unclassified; in 937 cases (18.4 per cent) the fingers were affected; the ages of those receiving awards were between 35 and 39 in 705, or 13.8 per cent, of the cases; and 2,538 (49.7 per cent) of the injured or killed were receiving from $10.01 to $15 per week, while 3,459, or 67.8 per cent, were receiving $15 or less.

The following is a statement of the condition of the fund as of date October 31, 1917:

ASSETS.

Cash on deposit, State treasury	$55,359.40	
Stocks and bonds	128,450.00	
Accrued interest on above and on deposits	1,393.67	
Policyholders' accounts (premiums in course of collection)	24,759.45	
Total assets		$209,962.52

LIABILITIES.

Reserve for losses	$61,117.58	
Reserve for unearned premium	7,519.69	
Reserve for reinsurance	2,736.95	
Reserve for expenses (Jan. 1, 1917, to Oct. 31, 1917)[2]	8,200.62	
Reserve for special surplus [3]	26,145.54	
Reserve for surplus	104,242.14	
Total reserves		209,962.52

[1] The number of cases involved is not given in the report.

[2] To be paid into the State treasury after Jan. 1, 1917. Sec. 27, ch. 597, Acts of 1916.

[3] Sec. 23, ch. 800, Acts of 1914.

INCOME AND DISBURSEMENTS.

Income.		
Net premiums written	$142,979.83	
Interest on deposits	540.29	
Interest on investments	3,275.00	
Accrued interest on deposits and investments	1,393.67	
Total income		$148,188.79
Disbursements.		
Losses paid, medical	$10,318.50	
Losses paid, temporary total disability	15,033.35	
Losses paid, permanent total disability	593.23	
Losses paid, temporary partial disability	192.36	
Losses paid, permanent partial disability	3,396.73	
Losses paid, death (dependency)	6,707.02	
Losses paid, death (no dependency)	150.00	
		36,391.19
Less amount paid on account of accidents that occurred prior to November 1, 1916		13,649.20
Net losses paid for 12 months ending October 31, 1917		22,741.99
Reinsurance		3,085.18
Return premiums		247.16
Reserve for expenses [1] (due State treasurer Jan. 1, 1918)		8,200.62
Reserve for losses (accidents Nov. 1, 1916, to Oct. 31, 1917)		36,406.94
Reserve for reinsurance		2,736.95
Reserve for special surplus [2] (on premiums written Nov. 1, 1916, to Oct. 31, 1917)		14,297.98
Reserve for surplus (additional account business Nov. 1, 1916, to Oct. 31, 1917)		60,471.97
Total disbursements		148,188.79

OPERATION OF THE OHIO STATE INSURANCE FUND.

The Ohio Industrial Commission has just published a report containing a survey of the operations of the State insurance fund.[3] This report is issued as a communication to the subscribers to the fund and is an effort to determine the amount the Ohio plan has saved the employers of the State. The commission applied the stock company rates to the earned pay roll which had been developed under the Ohio plan and found that the premiums thus computed from July 14, 1911, to May 15, 1917, would have amounted to $27,174,402.59. Deducting from this sum 2½ per cent loading for taxes and 16 per cent for a possible reduction of rates on account of faulty operation of the merit rating system, leaves $22,255,835.73 as the minimum amount of insurance premiums that would have

[1] To be paid into the State treasury after Jan. 1, 1917. Sec. 27, ch. 597, Acts of 1916.

[2] Sec. 23, ch. 800, Acts of 1914.

[3] A Survey of the Workmen's Compensation Insurance Field in this Country. Bulletin of the Industrial Commission of Ohio, December, 1917.

had to be contributed by the employers of the State. On the other hand the actual total losses of these subscribers to the State fund for the same period were $12,967,486.92, and the aggregate cost of administering the State fund was $1,101,406.51, making a grand total cost of $14,068,893.43. The cost of administration includes the original cost of organizing the State fund, all rating inspections, statistics, claims, investigations, settlements, and the commercial rate of rent on all office space. The saving to the employers therefore has been "the difference between $22,255,835.73 and $14,068,893.43, or $8,186,942.30. In other words, the increase in the cost of the plan of the liability insurance companies over the Ohio plan is as an absolute minimum 58 per cent."

The report further states that "the earned premium of the Ohio State insurance plan for 1917 will be approximately $8,000,000. The total cost of administering the Ohio State insurance plan for 1917 is $312,279.30. (Incidentally the interest earnings of the fund for the year have been $304,455.27. * * *) Computed on the basis of their 40 per cent expense ratio, it would have cost the liability insurance companies $5,333,000 to have provided this $8,000,000 in compensation benefits. * * * It is conservative to state, therefore, that for the single year 1917 the Ohio State insurance plan has saved its subscribers, as an absolute minimum, $5,000,000." Using the same basis of computation for the entire country the commission concludes that had the Ohio plan been in operation throughout the United States it would have saved the employers of this Nation in the single year of 1917 the sum of $23,400,000.

The following four reasons are given why the Ohio plan would result in such great saving to the employers: (1) The factor of acquisition cost or agents' commissions would be eliminated; (2) duplication of work in pay roll auditing, claim adjustments, statistical computations, and so on, would also be eliminated; (3) the maintenance of a home office in the East with its heavy attendant expense would be unnecessary; and (4) the Ohio plan pays no dividends to stockholders.

The report traces the development of the State fund insurance plans in the United States. The cumulative annual premium income in 1911 was $422,818.20, while in 1917 it had increased to $53,131,043.67. "Thus, whereas in 1911 the liability insurance companies had substantially a complete monopoly of the industrial accident field in the United States, in the brief space of six years the State funds have entered and are now already writing almost one-third as much business as are these companies."

The report also contains two sets of comparative insurance rates for practically all risks or classifications. One compares the Ohio

rates of March 1, 1912, with those in effect July 1, 1917; the other compares the rates of nine States (New York, California, Illinois, Wisconsin, Indiana, Michigan, Kentucky, Colorado, and Pennsylvania) which were in effect in 1917.

WORKMEN'S COMPENSATION INSURANCE RATES FOR MINING AND SMELTING IN UTAH.

The State of Utah, which enacted a workmen's compensation law in 1917, has just adopted a schedule of insurance rates for mining risks for the State insurance fund. These rates, which were computed by the National Workmen's Compensation Service Bureau of New York City, have been critically analyzed in a report made to the Utah chapter of the American Mining Congress by Dr. I. M. Rubinow.[1]

The question of reasonable and adequate insurance rates under workmen's compensation laws is an important one from the viewpoint of the employer. The determination of adequate rates, however, because of insufficient accident experience and the complex actuarial factors involved, is a difficult one.

Two main factors enter into the making of compensation rates—(1) the basic pure premium or actual cost of compensation benefits, and (2) the multiplier, composed chiefly of the law differential and the loading expense or cost of administration. Dr. Rubinow has subjected each of the several factors to a critical examination and concludes that the rates computed by the national bureau and adopted by the Utah Industrial Commission are too high. These rates and the basic pure premiums upon which they are based are as follows. The multiplier for the State of Utah was computed at 2.49.

	Premiums.	Basic pure premium.
Clay and shale—surface	$3.70	$1.48
Gold mines	4.54	1.70
Ore concentration	4.04	1.62
Metal mines	5.59	2.24
Iron mines	6.70	2.69
Smelting	6.11	2.45

BASIC PURE PREMIUMS.

As already noted, the basic pure premium means the net cost of compensation losses in each classification, ascertained from experience and reduced to the basis of the old Massachusetts compensation law of 1912, which is now obsolete. In ascertaining this basic pure

[1] Report on Insurance Rates for Mining and Smelting under the Workmen's Compensation Law of Utah, by I. M. Rubinow, consulting actuary and statistician, New York City, to Utah chapter, American Mining Congress, June 6, 1917. 23 pp.

premium, experience of many States has been used. But in view of the difference in the compensation scales of different States, the experience of many States is reduced to what it would be on the scale of the old Massachusetts act. The basic pure premium of $2.24 for metal mines has been accepted without criticism inasmuch as all such premiums have been agreed upon by a so-called standing committee in which stock companies, mutual compensation companies, State insurance funds, and State insurance departments were represented. These basic pure premiums represent the best information and judgment available and, as regards mining, based upon many million dollars of experience from Colorado, California, Michigan, and other States.

THE MULTIPLIER.

The multiplier of 2.49 consists of five factors:

1. Loading for underestimates of outstanding losses..... 1.02
2. Factor of law differential..... 1.30
3. Factor of loading for increased industrial activity..... 1.10
4. Expense loading, 40 per cent of gross premiums.
5. Loading for profits, 1½ per cent of gross premiums.

The formula used is as follows: $\frac{1.02 \times 1.30 \times 1.10}{.585} = 2.49.$

The denominator of 0.585, or 58.5 per cent, is obtained by subtracting from 100 per cent the total of factors 4 and 5. These several factors of the multiplier are analyzed in detail in the report.

UNDERESTIMATE OF OUTSTANDING LOSSES.

The loading of 2 per cent is based upon the theory that the experience from which all rates are to be computed consists partly of losses actually paid and partly of losses not yet paid and outstanding. These latter losses are estimates, and it is claimed that on the whole they are somewhat lower than they should be. To correct this error the actuarial committee of the national conference has agreed to load the pure premiums for this factor by 1.02. The author suggests that after four or five years of experience the insurance companies should have learned sufficiently to estimate outstanding losses, and therefore it should not be necessary to load for underestimates; but since this loading of 2 per cent is not a very heavy burden and has been unanimously adopted, no objection should be raised against it.

LAW DIFFERENTIAL.

The law differential for the Utah act was computed by the National Workmen's Compensation Service Bureau at 1.30. This law differential measures the comparative cost of the Utah law in proportion

to the old Massachusetts act. In other words, the scale of benefits under the Utah act are 30 per cent higher than those of the 1912 Massachusetts law would have been. While adhering strictly to the method of computation used by the national bureau, Dr. Rubinow has arrived at the substantially smaller differential of 1.18 instead of 1.30. The details of this computation are given in the report. The different result obtained is stated as being entirely due to information as to wage conditions in the Utah mines, which data have never been published, and were therefore not available to the committee compiling the differential in New York. The reason why wage conditions affect the law differential is given as follows:

Most compensation benefits are expressed in weeks' wages. The premiums are also computed as a percentage of the pay roll. Therefore, the computation of a law differential is made by estimating cost of accidents, not in dollars and cents, but in weeks' wages. In the Utah law are certain provisions about maximum benefits which substantially reduce the cost of compensation. In payment for temporary disability and also for dismemberment there is a $12 maximum limit. In payments for fatal cases and for total permanent disability there is a $15 per week maximum limit. In other words, while the law in general provides for a 55 per cent benefit scale, a great many workmen will receive a good deal less than that.

This fact was, of course, well known to the committee which computed the Utah differential. Evidently the saving will be greater whenever wages are higher. If the injured workman receives only $2 or $3 per day, little will be saved of this compensation because of a maximum limit. If the injured workman is a miner, receiving $4, $5, or $6 per day, the saving produced by the maximum will be substantial, and the higher the wage the greater the saving.

The New York committee had no data in regard to wages paid in the Utah mines, nor, in fact, in regard to any wages paid in Utah. Therefore, in order to estimate the saving produced by this maximum limit provision of the law, they have used some statistics of wages in California, for 1914 or 1915. The average wage in the statistics used by the committee was $18.95 per week. Information collected by me here in regard to the 7,400 employees in mines and reduction mills indicates an average weekly wage of $27.65, obviously producing a very much larger saving than the committee figured on.

My computations indicate that a maximum limit of $12 produces a saving of 20 per cent as against what the cost would have been without such limit, while the bureau committee only allowed a discount of 5 per cent for that. The $15 limit produced in my computation a discount of 10 per cent as against one of 3½ per cent in the bureau's computations.

The second point where I am forced to differ from the bureau is in the cost of medical aid, and that also largely depends upon the same factor of wages.

The average cost of medical aid under the old Massachusetts law was estimated at nine-tenths of a week's wage. Since the Massachusetts law gave medical aid only for two weeks, and the Utah act provides for medical aid up to $200, the committee figured the charge for the average cost of medical aid at 1.4 of a week's wage. This charge would not be excessive if it only meant an increase of some 50 per cent in cost, but as a matter of fact, it means a good deal more than that. The average wage in Massachusetts is about $14.22, and nine-tenths of that makes the average cost of medical aid per case in Massachusetts $12.80, while the average wage in the metal mines and mills of Utah is $27.65, and 1.4 times that amount equals $38.71, which is in my opinion

entirely too high. The allowance I made of 1.17 week's wages per case will give $32 per case, and should be more than ample.

It thus appears that, without going into the discussion of the law differential for the entire manual and classifications where the differential of 1.30 may be fully justified, the differential of 1.18 should be more than ample for mines and metal mills.

As a matter of fact, even without going into actuarial details, these are practically the conditions as between the Utah law and the old Massachusetts act:

1. The scale of benefits is 55 per cent instead of 50 per cent, thus adding 10 per cent to the cost.

2. The waiting period is reduced to 10 days instead of 2 weeks, a slight addition of perhaps 1 per cent or 2 per cent to the total cost of the act.

3. The cost of permanent partial disability cases and dismemberments is about the same, but the premium totals are much more costly in case of total permanent disability providing for life benefits. This case, however, is extremely rare. The provisions for medical aid are more liberal.

As against these factors of increasing cost there is, as already pointed out, the very material saving produced by the maximum limit applied to the high Utah wages.

It may also be pointed out that there is a strong probability of this saving becoming greater, as wages are likely to continue to increase in the next year or two. Over 75 per cent of wageworkers under present wage conditions would receive $12 per week instead of 55 per cent of their wages, and 40 per cent of the wageworkers in case of total permanent disability or death will receive $15 instead of 55 per cent. With an increase in wages this difference will be still greater.

The statistical tables and methods of computation by which the author arrived at the law differential of 1.18 are given in detail in the report. Briefly, it is the application of his "standard accident table" to the Massachusetts and Utah compensation laws.

LOADING FOR INCREASED INDUSTRIAL ACTIVITY.

A loading for increased industrial activity was placed upon compensation rates for the first time this year. This loading for Utah has been computed at 10 per cent. It is claimed that the experience used for computing the basic pure premiums refers to 1912, 1913, and 1914, and partly to 1915, and therefore would be misleading when applied to the cost in 1917. The committee in New York which decided to put on an additional loading for this difference between the cost in 1912 to 1914 and a probable cost next year, has given the following reasons:

The intense business activity has caused establishments to speed up. This in return has resulted in the employment of inexperienced help, in the overworking of the help, in the casting aside of safety campaigns and safety measures of one kind and another, in the overcrowding of factories, etc.

Industrial activity has caused a shift in employment. This shift was doubtless very general and affected workers in all occupations. Together with this shift of labor there was undoubtedly some adopting of labor sources not usually used. On the whole, the shift on labor placed many workmen in positions which they had not had sufficient training to fill efficiently, and which they never would have been called upon to fill under normal conditions.

Dr. Rubinow states that on the whole it seems preferable to accept the loading factor of 1.10 for increased industrial activity as a margin of safety. The difficulties of the labor market are generally recognized, and they may affect the mines in Utah to some extent. The other consideration as to the overworking of help and the overcrowding of workshops probably does not apply to the mines and metal mills. These factors, however, were left in by the author, so as to meet the possible argument that an effort has been made to reduce the cost below the lowest level compatible with safety.

EXPENSE LOADING.

The expense loading is the insurance carrier's cost of doing business or the general administration expenses. This includes the expense of acquisition, administration, inspection and claim adjustment, taxes, and special items. The stock casualty companies are at present doing compensation business at an expense of 40 per cent of the gross premiums. In addition, for the first time a special profit loading of 1½ per cent on gross premiums has been provided for. A loading for expense and profit of 41½ cents on the dollar of gross premiums means that only 58½ cents are left for payment of losses. Finally, 1 cent is added to the premium rate of each classification as a general loading for catastrophe hazards. The question, however, is not so much whether this entire method should be accepted or rejected, but only how far the various factors and loadings are applicable to mining conditions in Utah.

In defense of this expense loading, it is claimed by the casualty companies that compensation on an average requires some 40 per cent expense, distributed as follows:

Acquisition expense	16.9
Administrative expense	9.1
Inspection and adjustment expense	10.5
Taxes and special items	3.2
Total	39.7

After an examination of the several factors comprising the expense loading the author concludes that a loading of 30 per cent is sufficient. Several arguments are offered justifying this conclusion. In the first place the high premium rates and also the large pay-roll exposure would justify a reduction in the expense loading since the agency commissions and administrative expense would be lower. Moreover, the fact that several casualty companies have combined to write coal-mine insurance in many States on a basis of 25 per cent for expense loading leads the author to believe that a lower expense loading may also be possible in case of metal mines. The experience

of mutual companies is also cited. Such mutual companies writing compensation insurance in the East with similar average premium policies here reported an expense loading of 18.3 per cent.

The author concludes his report with a discussion and analysis of insurance rates for coal mines.

WORKMEN'S COMPENSATION INSURANCE AND THE CATASTROPHE HAZARD.

The problem of the catastrophe hazard, involving the infliction of large losses by the occurrence of a single accident, is not a new one in the field of employers' liability insurance, but with the establishment of the workmen's compensation system its importance has been greatly increased. This was emphasized early in the history of workmen's compensation in this country by the so-called Chehalis disaster, in which 8 out of 10 of the employees in a factory manufacturing fireworks in the State of Washington lost their lives on November 1, 1911, one month after the compensation law of that State had gone into effect, this being also the first year in which any effective State law became operative. The number of persons killed, while not large in comparison with the results of mine explosions, was disproportionate in relation to the number of persons in the class to which the employment was assigned under the Washington statute, and had the effect of seriously overburdening the fund, a condition from which it has not yet extricated itself.

The law of West Virginia, also providing for classified funds for State insurance, went into effect in October, 1913. A truly catastrophic disaster occurred in April of the following year, in which 183 persons were killed, involving costs and liabilities in excess of $223,000. The next largest disaster affecting this fund occurred in March, 1915, when 112 men lost their lives in a single explosion, costing the fund an additional $140,593. The Washington authorities have been seeking a remedy in the enforcement of contributions from the larger employers in the industrial group affected, while in West Virginia a reserve fund was provided for by an act of 1915, "to cover the catastrophe hazard and all other unanticipated losses." Obviously both of the methods must be brought into play to secure the proper protection of employees exposed to hazards of the nature under consideration, since an unsupported fund, no matter what percentage of contributions are set aside for reserves, will not be adequate; while on the other hand, a fair average rate of contributions can not be counted upon to meet the catastrophe hazard in extrahazardous employments.

It is only in a minority of the States thus far, however, that the question must be met by either of these methods, since in most instances the insurance is carried, not in a State fund, but in insurance companies, stock or mutual. In the incipiency of the movement, stock companies were inclined to refuse extrahazardous risks, of which coal mining is the most conspicuous instance, listing them in their instructions to agents as "prohibited risks." Inasmuch, however, as the prosecution of such industries is essential, it was obviously undesirable that employees engaged therein should be without the protection of an adequate guaranty for the payment of the compensation contemplated by the law. About two years ago, therefore, 10 of the principal companies engaged in insurance of workmen's compensation formed a pooling system, calling themselves The Associated Companies, for the especial purpose of bearing collectively the risks involved in insuring the payment of compensation to employees in coal mines. The favorable results of this organization have led to the extension of the arrangement to a class of risks recently greatly enlarged, i. e., the manufacture of munitions for the use of the United States and its Allies, and to certain other industries. The urgency of the situation is no less than in the case of coal mining, and the hazard is equally as great, if not greater. The experience of The Associated Companies with regard to coal-mine insurance led to the development of a proposition which was made public on January 12, through the chairman of The Associated Companies. Beginning with a brief account of their experience in handling coal-mining risks, the enumerated companies announce that they, "under the same operating name, have now entered into a supplemental agreement to provide a coinsurance and reinsurance method for handling not only risks possessing an obvious element of collective hazard, but risks which for other reasons are difficult subjects of insurance for a single company." The classifications proposed to be covered are not ready to be announced, but "can best be described by the term 'prohibited risks,' if we adopt the vernacular of the insurance office."

The grounds for the action are stated in the following paragraphs:

These companies unanimously believe that there should be no such thing as an uninsurable workmen's compensation risk if the elements of hazard are limited to those which are necessary and inherent in the business. The reason for the maintenance of a prohibited list by individual companies is that certain risks, because of the collective hazard involving possible injuries to many persons in one accident, or because of other conditions which can not be fully described except at great length, can not be adequately distributed by one company, however large its premium income or however wide its distribution, under the existing practices and requirements of compensation insurance. Compensation insurance properly written involves an unlimited policy undertaking so far as amount is concerned, and ordi-

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narily involves the requirement that the entire risk should be accepted by one company. Safety for both the pol cyholder and the company is obtained only by sufficient distribution. Distribution is sometimes attempted by ordinary reinsurance methods. Under this practice one company takes the risk entire and reinsures parts of it with other companies. Such other companies are ordinarily not disclosed to the policyholder, and the policyholder has no contract relation with them. Such reinsurance methods fail to meet the peculiar requirements imposed by compensation and, therefore, other methods should be devised which will positively provide not only cohesiveness and continuity of the reinsuring interests but also uniform treatment of difficult risks and maximum protection to both the employer and employee engaged in hazardous undertakings.

The arrangement now perfected for handling these difficult risks is in reality an extension and simplification of the long-existing theory of coinsurance rendered uniform and certain by a joint and several policy rather than by independent policies of companies involving a joint and several obligation.

The Associated Companies propose not only to provide indemnity according to the provisions of the law and of their contracts, but to render service in behalf of safety and the reduction of accidents by the combined knowledge and experience of the whole group.

The gross assets of the companies forming this combination were at the end of the year 1916 in excess of $300,000,000, no doubt considerably increased during the ensuing year, though the figures are not yet available. The protection of this fund will be extended to any employer who "will give proper attention to, and provide suitable remedy for, the unfavorable elements of the risk which are within his control. The 'prohibited' list of the future, therefore, will include only those employers who, because of indifference, unwillingness or deliberate design, refuse to improve and maintain the moral and such of the physical conditions of their risks as are capable of improvement and which, if unimproved, constitute a hazard against which no insurance should under any circumstances be provided."

ACCIDENT COMPENSATION AWARDED FOR NYSTAGMUS.[1]

A decision very important for miners has recently been rendered by the Superior Insurance Office in Dortmund, Germany, with respect to the claim of a miner for award of an accident pension for nystagmus developed consequent to an accident. Nystagmus is a spasmodic movement of the eyes, rotatory or from side to side, frequently affecting miners and others working in a dim light and a stooping position.

The miner in question suffered an accident on September 10, 1915. He was hit on the right parietal bone by a piece of rock weighing about 1 pound. A week later the injury caused develop-

[1] Correspondenzblat der Generalkommission der Gewerkschaften Deutschlands. Arbeiterrechts-Beilage, No. 10, Berlin, Oct. 13, 1917.

ment of erysipelas. On November 1, 1915, the miner was again able to resume his work but even during the first shift he observed that he could not see well and had the feeling that all objects whirled round him (objective vertigo). He consulted a physician who diagnosed it nystagmus. Subsequently the nystagmus became so violent that the workman could not continue in his occupation as a miner and after long idleness had to accept less remunerative employment in the mine at repair work. A claim for accident pension filed by him with the Miners' Trade Accident Association was disapproved. In disapproving the claim the association stated that nystagmus is a common trade disease among miners and may have been latent in the case of the claimant and that proofs were lacking that the nystagmus of the claimant had been caused or aggravated by the accident.

In the subsequent proceedings on appeal voluminous expert medical testimony bearing directly or indirectly on the case in question was introduced. It was pointed out that a large number of medical authorities, particularly in France and Belguim, take the point of view that nystagmus can be caused through accident or disease. A lengthy medical opinion rendered by the Royal Eye Clinic in Marburg where the claimant had undergone examination stated in a very positive manner that in the case of the claimant everything points to causal connection between the accident and his disability due to nystagmus. This opinion estimated that the earning capacity of the claimant had been reduced 20 per cent and the Superior Insurance Office in Dortmund concurred with this opinion and ordered the Miners' Trade Accident Association to grant the claimant a pension corresponding to 20 per cent of his previous computable annual earnings.

The decision rendered in this case is of special importance for miners because up till now it has always been disputed that the manifestation of latent nystagmus can be caused through an accident. Nystagmus has always been considered as a trade disease no matter what phenomena accompanied its manifestation.

INDUSTRIAL ACCIDENTS AND DISEASES.

BLINDNESS FROM INDUSTRIAL USE OF WOOD ALCOHOL.

The following article by Dr. John M. Robinson, of Duluth, Minn., is reprinted from the Journal of the American Medical Association for January 19, 1918 (p. 148). It gives an account of a case of blindness resulting from the industrial use of a commercial product containing a 4 per cent solution of wood alcohol, with some discussion of the danger of poisoning from denatured alcohol containing wood alcohol as the denaturing fluid. In connection with this article reference should be made to an article by Dr. Alice Hamilton in the MONTHLY REVIEW for February, 1918, on "Dope poisoning in the making of airplanes," in which there is further discussion (p. 47) of the danger of using wood alcohol as a denaturing agent.

T. P., aged 29, a Greek of good physique, was referred, June 1, 1917, to my ophthalmic service at the Duluth Free Dispensary because of some difficulty which an optician had had in fitting the man with glasses. Complaint was made that objects looked smoky, and that the sight of the left eye had been failing for six weeks. Vision of the right eye was 20/30 and J. 2; the color fields were much contracted; the field for white was moderately reduced on the nasal side, and greatly contracted on the temporal side. No definite scotoma could be located. The optic disk showed possibly a slight pallor. Vision of the left eye was reduced to fingers at 1 foot, except in the upper temporal quadrant, where fingers could be counted at 12 feet. The disk on this side was distinctly pink—a capillary congestion. Neither at this time nor later was there increased tension of either eye, or changes in the media or fundi beyond the disks. The vessels remained of normal caliber, with no swelling nor cupping of the nerve heads. The pupils were equal, and noticeably large, the dilatation being marked in reduced light; reaction to accommodation and light was equally sluggish. Twelve days later the vision of the right eye had fallen to 20/70, at which point it remained for about a fortnight, and then sank with the left, so that by September 15 the bare detection of finger movements was the best that either eye could do. Both optic disks in the meantime had become very white.

The family history was negative. The father and mother and nine brothers and sisters were all living and in good health. There had been no visual trouble among the grandparents, as far as known. The personal history was clear up to April 1; no injury, and no illness other than the usual diseases of childhood. Syphilis was denied, and evidences of it were lacking. The patient's wife was well, in her first pregnancy, and since has been delivered at term of a healthy child. The Noguchi test was negative. There was no ataxia. The patellar and other reflexes were normal. There were no signs of tabes or paresis. The teeth, tonsils, nasal accessory sinuses, gastro-intestinal and renal functions and the pituitary and thyroid glands were all given consideration.

The man had worked as a railway warehouseman up to March 1, at which date he obtained employment in a shoe-shining and hat-cleaning shop connected with a cigar stand. Here he worked for two or three hours each day dyeing hats with a

commercial product called "Colorite"—a black liquid dye with a rather faint yet distinct odor of wood alcohol. The place was fairly well ventilated; there was also a door which was very frequently opened on the street. The temperature was about 70° F. His hands were spattered and stained black "about a quarter of the time." After five or six weeks of this he first began to note that objects looked smoky, while coincidently he became easily tired, perspired freely, and suffered slightly from nausea and a somewhat vague "stomach trouble." There was slight headache and dizziness, which, however, eventually disappeared. These symptoms were more or less pronounced when he came under my observation after six weeks. When last seen he was once more in good health, but totally blind. This picture is, I believe, fairly typical of wood alcohol poisoning of the slow type. To make it a more perfect case, the findings should have included a scotoma, and "contracted retinal vessels," perhaps.

An original bottle of "Colorite," of which the man had used a dozen or more, was sent to the Bureau of Labor Statistics, United States Department of Labor. An analysis made at the Hygienic Laboratory disclosed 4 per cent of wood alcohol, the coloring matter being reported as one of the indulin group, negrosin. Though analin black, as well as other of the analin dyes, may sometimes be classed as poisons, and have been known to exert deleterious action on the cornea and conjunctiva,[1] no instance of nerve atrophy has been reported as following the use of any of the indulins. The man polished few shoes; nitrobenzene seemed not to be a possibility. The wife and fellow workers stated that he was an abstainer from alcoholic drinks.

DANGERS OF WOOD ALCOHOL.

In reporting one of the formidable series of imbibition cases from Russia subsequent to the abolition of vodka, Yakovleva [2] calls attention to the cumulative action of the poison. Tyson and Schoenberg [3] refer to over a hundred cases of death and blindness, up to 1912, following the inhalation of wood alcohol. Buller and Wood,[4] in their review of the subject, say, "It is also highly probable that in susceptible subjects repeated or even single methylated 'alcohol rubs' may produce poisonous symptoms, through absorption of the spirit by the skin." A few cases put on record since that report have corroborated this view. Campbell [5] mentions a patient who had his chest bathed once daily for two weeks with wood alcohol, resulting in light perception only in one eye, and vision 15/20 in the other, with contracted field. Woods [6] reported sudden blindness coming on in a man who had rubbed his legs with wood spirit each day for a month. Ziegler [7] mentions an instance in which a temporary amblyopia followed exposure to the fumes of wood alcohol for only one hour daily over a month's period. The findings of Loewy and von der Heide [8] that as small an amount of methyl alcohol as 0.2 per cent in the inspired air may lead to absorption in the body in not inconsiderable quantities indicates the possible danger that exists in even a moderate exposure to the poison.

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[1] Lewin and Guillery: Die Wirkungen von Arzneimitteln und Giften auf das Auge, Berlin, 1905, 2, 788 (analin black); 1, 737 (nitrobenzene); p. 372 (wood alcohol).

[2] Yakovleva, A. A.: Cases of loss of vision from eau de Cologne, denatured alcohol, and similar substitutes for whisky, Russk. Vrach, 1915, 14, No. 25; abstr., Journal American Medical Association, Oct. 9, 1915, p. 1316.

[3] Tyson and Schoenberg: Archives of Ophthalmology, May, 1915.

[4] Wood, C. A.: Death and blindness from methyl or wood alcohol, Journal American Medical Association, Oct. 22, 1904, p. 1220.

[5] Campbell: Journal of Ophthalmology and Oto-Laryngology, Sept., 1915.

[6] Woods, Hiram: Wood alcohol blindness, Journal American Medical Association, June 14, 1913, p. 1762.

[7] Ziegler, Lewis: Archives of Ophthalmology, 1914, p. 516.

[8] Loewy and von der Heide: Biochemische Zeitschrift, 1914, 65, 230.

In a report relative to the possibility of poisoning taking place when the proportion of methyl alcohol is as small as 4 per cent, Dr. Alice Hamilton [1] quotes von Jaksch [2] to the effect that workers with denatured alcohol have shown symptoms of wood alcohol poisoning; Kobert,[3] who says that the disturbances of health complained of by these workmen are to be attributed in part to the piridin bases used in denaturing, and in part to the wood alcohol, and Goldsmith,[4] who agrees with Kobert, and who states that there was so much ill health and discomfort complained of by the men working with denatured alcohol that the workers sent petitions to the Reichstag, in consequence of which an inquiry was ordered.

Lewy [5] reports that for the time during which, in Austria, denaturing was done by means of a 2 per cent admixture of wood alcohol and 0.5 per cent piridin bases (the present U. S. Internal Revenue Formula 2), there were so many reports of sickness caused by the use of alcohol so denatured that the ministry undertook an investigation in Bohemia, where many of the Austrian industries are located. The report emphasized the fact that wood alcohol was being used as the denaturant in place of pure methyl alcohol, and that wood spirit contains large quantities of acetone, aldehyd, allyl alcohol, methyl acetate, and other volatile compounds, all of which are toxic in a higher or lesser degree; but the report admitted that the effect of methyl alcohol was undoubtedly the principal one. There were at that time a number of cases of amblyopia among the Bohemian workmen who had been using denatured alcohol.[6]

The United States Internal Revenue regulations prescribe two general formulas for denaturing: The one, as mentioned above, a trifle less than 2 per cent wood alcohol, while formula 1 provides for 10 parts of this spirit and 1 part of benzine to 100 parts of ethyl alcohol, each by volume, a mixture which, though suggested by no less authority than Dr. Wood,[7] would seem from the Austrian account to be fairly dangerous. It has also been set forth as an argument in favor of the use of wood alcohol as a denaturant that a 10 per cent "methylated spirit" has for a long time been used in Great Britain and that no case of amaurosis has been reported from its industrial use. I spent part of my apprenticeship in the English clinics, and again more recently was relief house surgeon at Moorefields. The vast majority of British workmen who live in or near the large centers go to the hospital clinics for their eye treatments; the clinics are usually crowded; the time for investigation is limited, nor is it common practice to follow the dubious case back to the home or workshop. It was found in reviewing the histories of 300 optic atrophy cases—an opportunity afforded through the courtesy of some of the Moorefield staff—that even when the aids of Wassermann, Roentgen, and Onodi had been taken advantage of, 15 per cent of the optic nerve degenerations remained unexplained.

In the same number of the Journal of the American Medical Association appears another article (p. 145) on "Wood alcohol poisoning," by A. O. Gettler, Ph. D., and A. V. St. George, M. D., pathologic chemist and pathologist, respectively, Bellevue and Allied Hospitals, New York, which discusses the dangers from the use of wood alcohol

[1] Hamilton, Alice: Statement to the Commissioner of Labor Statistics.

[2] Von Jaksch: Die Vergiftungen, Vienna, 1916, p. 277.

[3] Kobert: Lehrbuch der Intoxikationen, p. 600.

[4] Goldsmith: Weyl's Handbuch, 8, 830.

[5] Lewy, E.: Medicinische Chirurgische Rundschau, 1891, p. 508.

[6] Horbaczewski: The damage to health from the industrial employment of alcohol denatured with wood spirit, Das Oesterreichische Sanitätswesen, 1911, 23, 69, referred to by Hamilton (footnote 1, p. 4).

[7] Wood, C. A.: Death and blindness from methyl or wood alcohol poisoning, Journal American Medical Association, Nov. 30, 1912, p. 1962.

in liquors and various preparations offered to the public. After citing a number of cases in which poisoning occurred from such use of wood alcohol, the authors reached the following conclusions:

It is important to note that the refined wood alcohol, in addition to being used as a diluent of whisky, is frequently used in the preparation of essence of peppermint, Jamaica ginger, lemon extract, punch, cologne, liniments, Florida water, bay rum, witch-hazel, and in the arts in lacquers, varnishes, etc.

Physicians and health officers should warn the public of the dangers existing in the preparations of the kind enumerated above when applied to or introduced directly or by inhalation into the body. European authorities have shown that the denatured ethyl alcohol serves every purpose in medicine and in the arts as well as wood alcohol or better. We suggest, therefore, that legislation be enacted bringing about the prohibition of the sale of wood alcohol for domestic purposes, similar to laws now obtaining in England and Germany.

DISEASES OF OCCUPATIONS IN GREAT BRITAIN DURING 1917.

A summary of the cases of diseases of occupations, and deaths resulting therefrom, in Great Britain during 1917, and also, for comparative purposes, during 1916, is presented in the January issue (p. 24) of the Labor Gazette, published by the Ministry of Labor. It shows that the total number of cases of poisoning and of anthrax reported to the Home Office under the Factory and Workshop Act during the year ending December 31, 1917, was 650, of which 82 (12.6 per cent) resulted fatally; in 1916, 13.8 per cent of the cases reported resulted fatally. In addition to these cases, 57 cases of lead poisoning (including 18 deaths) among house painters and plumbers came to the knowledge of the Home Office during 1917. The following table gives an analysis of all these cases and the fatalities resulting:

CASES OF DISEASES OF OCCUPATIONS, AND FATALITIES RESULTING THEREFROM, IN GREAT BRITAIN DURING 1916 AND 1917.

Occupational disease.	Number of cases.			Number of deaths.		
	1916	1917	Per cent of decrease.	1916	1917	Per cent of decrease.
Lead poisoning:						
Factories and workshops	348	317	8.9	21	21	.....
House painting and plumbing [1]	72	57	20.8	20	18	10.0
Arsenic poisoning	.....	30	.....	.....	5	.....
Mercurial poisoning	18	17	5.6	.....	.....	.....
Phosphorus poisoning	2	3	[2] 50.0	.....	.....	.....
Toxic jaundice	206	190	7.8	57	44	22.8
Anthrax	105	93	11.4	16	12	25.0
Total	751	707	5.9	114	100	12.3

[1] Not reported under the Factory and Workshop Act. [2] Increase.

HOUSING AND WELFARE WORK.

ADMINISTRATION AND COSTS OF INDUSTRIAL BETTERMENT FOR EMPLOYEES.

BY ANICE L. WHITNEY.

In the numbers of the MONTHLY REVIEW covering the period from September, 1917, to the present issue, articles dealing with different aspects of the work for the improvement of working and social conditions for employees have been published. The present article treats of the methods of carrying on such work, the costs to the employer, and the effect of the work on the efficiency and stability of the force in the different establishments visited.

COST TO THE EMPLOYERS OF BETTERMENT ACTIVITIES.

It was found in this particular phase of the welfare study that it was difficult to get very exact information, both on the costs and on the comparison of the present conditions with those prevailing before service work for the employees began. It was rather surprising to find that few firms had definite knowledge of what the work was costing them. In the majority of cases, even with a fairly well organized department, no separate record of the expenditures was kept, and in those establishments which were able to give the amounts expended, there was so much diversity in the forms of welfare work for which the figures were given that it is difficult to make a comparison or arrive at very definite conclusions as to the outlay which might be considered to be a reasonable one. The costs, as given, vary from a fraction of 1 per cent to 5 per cent of the total annual pay roll. In those cases where the allowance is as high as 4 and 5 per cent, the costs of the pension or group insurance plans and the contribution to the benefit associations or the maintenance of an expensive clubhouse form a large part of the expense. It seemed, taking into consideration the scope of the work in relation to the costs, as reported by the different companies, that excluding unusual contributions to these features a fairly comprehensive program could be maintained for about 2 per cent of the annual pay roll. Another element to be taken into consideration in this matter of costs is the degree of participation of the employees. Those examples of welfare which cost the firms the most are not necessarily the most successful, since advantages are appreciated by most people in measure as they give

to them, both of money and effort. The company which, while encouraging and aiding such work, still leaves a share in both the management and the expense to the employee is probably nearer to harmonious plant relations than the employer who gives lavishly but administers the work in a more or less paternalistic spirit.

The following table shows, by industries, the number of establishments scheduled and their employees, the administration of the welfare work, and its effect in regard to the time lost and the stability of the labor force:

ADMINISTRATION OF WELFARE WORK AND ITS EFFECT UPON TIME LOST AND STABILITY OF THE FORCE, BY INDUSTRIES.

Industry.	Number of establishments.	Number of employees.	Welfare work administered by—		Establishments having—		Establishments reporting as to effect of welfare work upon—			
							Time lost.		Stability of force.	
			Employer alone.	Employer and employees jointly.	Outside agencies cooperating.	Welfare secretary employed.	Improvement.	No change.	Improvement.	No change.
Automobiles	9	95,683	6	3	3	3	5	1	2	2
Boots and shoes	5	23,930	1	4	1	1	3	.....	3	.....
Chemicals and allied products	7	13,539	2	5	3	3	4	1	3	1
Clothing and furnishings	13	19,498	3	10	8	10	6	.....	6	.....
Electrical supplies	5	51,040	1	4	2	1	2	1	1	2
Explosives	5	36,030	2	3	4	4	2	.....	2	.....
Fine machines and instruments	8	25,326	2	6	2	2	3	.....	3	.....
Food products	15	[1] 17,638	12	3	6	3	8	.....	5	1
Foundries and machine shops	49	143,882	28	21	12	16	18	6	18	8
Gas and electric light and power	10	[2] 27,102	1	9	1	2	2	2	2	1
Iron and steel	[3] 40	213,133	33	7	12	9	15	2	9	4
Mining, coal	12	34,807	7	5	4	1	6	3	3	6
Mining, other than coal	12	25,448	5	7	5	2	6	.....	7	.....
Offices	9	13,814	2	7	.....	3	2	1	1	1
Paper and paper goods	7	9,174	3	4	3	2	6	.....	3	1
Printing and publishing	10	12,769	5	5	3	4	4	.....	4	.....
Railroads, electric	17	60,642	6	11	3	4	6	2	5	2
Railroads, steam	10	393,583	4	6	8	1	2	1	2	1
Rubber and composition goods	9	42,847	5	4	3	6	4	1	3	.....
Stores	47	125,148	17	30	20	30	18	2	10	3
Telegraph and telephone	[3] 15	[1] 66,447	14	1	2	8	2	.....	3	.....
Textiles	60	71,221	41	19	31	16	21	2	22	2
Other industries	57	[1] 138,793	31	26	18	10	15	4	19	3
Total	431	[4] 1,661,504	231	200	154	141	160	29	136	38

[1] Not including 1 establishment, not reported.
[2] Not including 2 establishments, not reported.
[3] Individual plants of 1 corporation have been counted as separate establishments.
[4] Not including 5 establishments, not reported.

COMPARISON OF PRESENT CONDITIONS WITH THOSE PREVAILING BEFORE WELFARE WORK BEGAN.

The date of the beginning of welfare work, as reported by many of the firms, is somewhat misleading. Many firms had an employees' benefit association long before any other work of this character was even thought of, and to accept the dates given by these firms would give an entirely erroneous idea of the length of time over which the movement extends. It is safe to say, that with the exception of a comparatively few of these establishments, the major part of the progress along these lines would extend over only the last 10 or 12 years. The emergency hospital work, for example, has been introduced or extended in many of the hazardous industries since the passage of the various State workmen's compensation laws. The work along the lines of safety and sanitation also has been much influenced by these laws and has grown with amazing rapidity in the last few years. The increase in the number of firms providing a pension system for their employees has been very marked in the last seven years, and group insurance has developed entirely since 1911.

In spite of the fact that so much of this work is comparatively recent, it will readily be seen that, owing to the abnormal labor conditions of the past three years, it was very difficult to obtain from the companies a comparison of present conditions with those prevailing before welfare work was undertaken. The extent to which the output is affected by the welfare work is difficult to determine, both because of the present unusual labor conditions and the fact that few companies had made any study of this point. A few firms, however, gave it as their opinion that the output had been increased by it, although several of these stated that this improvement was only in part due to the welfare work. Quite a number stated that their increased output was due to a reduction in the working hours, a form of welfare which has not been given special consideration in this report.

The stability of the force also has been much affected in many plants by present labor conditions. One hundred and thirty-six of the establishments scheduled reported an improvement in this regard, due in whole or in part to the betterment activities. In many cases this was more than a mere expression of opinion, since many employers have, of late, been impressed with the fact that a large turnover is a very important item in the cost of production, and have been seeking to reduce this turnover by more scientific management of the employment departments and by the introduction of welfare features. One firm which had compiled statistics in regard to the reduction in the turnover had an increase of 13.4 per cent of employees of more than two years' service in 1916 over a similar group for 1914, due entirely, so the management stated, to their welfare work.

One hundred and sixty of the establishments reported an improvement in the time lost. There are probably two reasons for this: One is the work of the emergency hospitals, which care for the general health of the employees and do much preventive work, as well as sort out those most undesirable physically through their examinations on entrance; the other is the installation of safety devices and the education through safety lectures and literature, which has resulted in a large reduction in the time lost through industrial accidents.

Even though only a small proportion of the companies reported on this subject, still enough have done so to prove that welfare work does have an appreciable effect upon the work and health of the employees. It would be reasonable to suppose, even without the confirmation of such reports, that all service work which is carried on in such a spirit that it results in a more contented force, as well as a healthier one, must have the effect of making the employees more stable and more efficient. Another proof of this is found also in the attitude toward welfare work, even of those employers who are least in sympathy with it, for there is an apparent realization among them that much of this work is becoming necessary in order to get and retain a desirable class of employees.

ADMINISTRATION OF WELFARE WORK.

It will be found that the administration of this work is by employers alone in slightly more than half of the cases. This also probably gives a somewhat wrong impression, since there are necessarily many firms reported which do not do a great deal along these lines. The companies which do the least are those most likely to control entirely such features as they have, partly because the kinds of work first introduced are usually those which naturally remain under the immediate direction of the firm, and partly because it usually takes some experience in order to realize the desirability of giving the employees an active part in the conduct of the welfare activities.

It is natural that the employer should direct the work of the emergency hospital, although there are a number of cases where this has been given over to the benefit association; similarly several firms allow their employees to manage the lunch room, either on a cooperative basis or using the profits for either the benefit or the athletic associations. The employees quite frequently have a voice in the management of the club rooms or houses, in several instances being given entire control of the clubhouse. In the matter of athletics and recreation, more often the employer plays a passive part, assisting financially, and also providing rooms for meeting purposes, gymnasiums, and athletic fields. The work among families, except what is done in connection with the benefit association, is entirely under

the direction of the companies through the medium of the welfare secretary or visiting nurses. The administration of the benefit associations is in most cases either mutual or in the hands of the employees. Pension and group insurance funds, being in most cases provided by the firms, are therefore administered by them, as is much of the educational work, although frequently members of the force assist in teaching, especially in the classes in English for foreigners.

Mention must be made of one conspicuous and well-known example of cooperative management by the firm and its employees of both the business and the welfare organization. It has been the policy of this company in increasing degree through the past quarter of a century to give the employees a share in the management. An association of the employees is maintained, to which every employee belongs. The affairs of this organization are conducted by a group elected by the employees, and this executive body has the power to make, change, or amend any rule that affects the discipline or working conditions of the employees. This can be carried even over the veto of the management by a two-thirds vote of all the employees. This association is also represented by 4 members out of 11 on the board of directors of the corporation. All the parts of the welfare organization have been carefully built up and are controlled and managed by the council of the association through committees. The firm contributes club and business rooms, certain salaries, and any other assistance necessary. The fundamental principle followed by the club in the management, however, is that these activities shall be in the main self-supporting and that financial or other assistance rendered by the firm shall receive a direct return from the employees in increased efficiency. There is no doubt that in this particular instance the generous and broad-minded policy of the firm is reflected in the very unusual personal interest in the business which is evidenced by the employees as a whole.

COOPERATION WITH OUTSIDE AGENCIES.

Employers cooperate frequently for the betterment of their employees with certain established outside agencies, such as the local school boards, the Y. M. C. A., and the Y. W. C. A. In the North and West the continuation school work is often carried on beyond the requirements of the law, and several companies also cooperate with the public schools in their apprenticeship courses. In the South the public school terms are often extended many months each year through the contributions and assistance of the companies. The Y. M. C. A. and the Y. W. C. A. also serve as the medium through which the employers carry on the club work for employees, as in the case of most railroad companies which use the Y. M. C. A.,

since it is so well organized and seems particularly to fill their needs. In a few other instances firms have established their own branches of these organizations or pay membership fees for junior employees in the city branch. In many instances either one or both of these organizations, with the sanction of the company, conduct meetings for employees in the plant. In one western city an association of several of the nursing and charitable organizations does much welfare work for employees and their families in the different industries. This association is supported by voluntary contributions, and recently all the principal industries in the city except one agreed to pay 5 cents per month for each employee in return for which the association cares for any cases to which the employer calls its attention.

EMPLOYMENT OF WELFARE SECRETARY.

In 141 cases it was found that a welfare secretary was employed. Very often the secretary's sole duties are supervising the various welfare activities. In other cases the employment and welfare departments are merged into one, part of the time of the manager being given to each, and in still other instances the doctor or head nurse assumes these duties in addition to the hospital work. In quite a number of instances the welfare department employs a corps of trained workers. One large department store has, in addition to its medical department and welfare secretary, a number of college women engaged in educational work, physical culture, and dancing, as well as supervising the library and the girls' clubhouse. Another company which does much community work has, in addition to the head worker, seven others, teachers, librarian, and a visiting nurse who have kindergarten, manual training and other classes, many clubs among both young and old, and also have much general supervision of the townspeople, of whom many are foreigners.

The duties of a welfare secretary are many and varied. She frequently must oversee the work of the emergency hospital, see that the food served in the lunch room is kept up to the standard, and that the kitchens are kept in a sanitary condition, and look after many of the details of sanitation; she often has charge of the library unless it is sufficiently large to require one or more special attendants; her office is so placed that she has a view of the rest and recreation rooms, and in some plants, of the cloakrooms. Often, in cases of special need, she visits the homes, and a number of instances were found where the firm had placed a sum of money at her disposal, to be used at her discretion, in special cases of illness or distress among the employees or their families. In the larger cities there is a great deal of cooperation among those serving different firms in this capacity, in the way of exchange of ideas, and the visiting nurses'

association also is utilized often to help out in cases of illness in families. The State factory inspectors suggested to certain establishments, in one large city, which had not yet taken up any work of this sort, that they should allow an experienced woman to start the work for them. This woman, feeling that this particular city was well equipped to do the necessary educational and recreational work, did not include such work in her program, but confined herself to the installation of rest rooms, emergency rooms, and lunch rooms. Even when little space was available she utilized it until such time as the firm could provide more. Two or three months were spent in each plant getting the work under way, when it was turned over to a competent woman, and the same thing begun in another establishment. This particular welfare worker was able to interest the employers, since she believed that production is increased and labor turnover decreased by the introduction of this work.

CONCLUSION.

One might conclude that all welfare secretaries are women since they have been cited especially. In the majority of cases this is true, but in a number of instances this department, especially in those industries employing only men, is managed by a man. In either case the opportunity which is presented for a very broad and helpful service to the employees is very great. It is a difficult position to fill, since, if the policy pursued is not a liberal and broadminded one, the employees may feel that the position is being used to their disadvantage, but if, on the other hand, the one who holds it is gifted with sympathy and tact, the possibilities for help and encouragement of all kinds are almost unlimited.

LOW-COST HOUSING IN AMERICA.[1]

How to meet at low cost the requirements of housing which shall be adequate in point of shelter, sanitation, provision for family life, and esthetic pleasure is the subject of a pamphlet recently issued from the Department of Social Ethics of Harvard University. It describes plans of one-family and semidetached houses actually constructed for approximately $2,000 per dwelling. It is confined largely to examples of work done by employers, the data having been secured by correspondence with the companies.

The study emphasizes that the suggestions presented in regard to comparative costs of the houses of different types and materials are to be considered as "merely suggestive, and are not entitled to carry

[1] Low-cost cottage construction in America; a study based on the housing collection in the Harvard Social Museum, by Winthrop A. Hamlin. Cambridge, Mass., Harvard University, 1917. (Publications of the Department of Social Ethics, No. 7). 30 pp. 4 charts. Illus.

the weight of authority." Among the conclusions arrived at are: That shingled houses are more expensive than clapboards; brick about 7 per cent more expensive than frame (clapboarded), and stucco on metal lath about 3 per cent more expensive than frame. Data on concrete is too scant to make any estimate.

Frame construction seems likely to decrease because of the generally increasing cost of lumber as compared with that of clay and cement products, and because of the fire risk and high maintenance cost of frame houses. But in many localities wood still remains cheaper than other building materials. It will also tend to be used wherever social changes are occuring so rapidly that a more permanent type of dwelling would be an unprofitable investment. Brick is to be recommended wherever local conditions are such that it can be cheaply secured. Hollow tile is in somewhat the same class, though requiring further development before its possibilities can be fairly judged. Concrete, especially "poured" concrete, is of value chiefly in large-scale housing undertakings, though of course the steel forms once bought can be used to pour one house or a hundred. The progress of stucco depends especially on the certitude of good workmanship in its use.

The following paragraph suggests the author's ideas as respects the planning of low-cost cottages:

The plan of the cottage centers around the kitchen, and indeed the necessary size of the kitchen may be said to mark—inversely—the social progress of the worker's family. This evolution, however, takes different forms in various sections of the country, so that the following outline of it can claim to be only a general suggestion. When the family income averages about $10 or less per week the wife usually has all her time consumed in cooking, washing, caring for the children, and doing outside washing or going out herself to work; in such homes the kitchen is perforce the family living room, and should be made proportionately ample. * * * Roughly speaking, when the weekly income approaches $18, while the family may eat in the kitchen, they want a "best room" in which to receive callers, actual or hoped for. In families of a higher income class, the housewife is quite willing to carry food and dishes into the dining room in order to escape eating the food in the place where it was cooked; also a separate dining room is deemed more confortable by the rest of the family. If there are only two rooms besides the bed rooms, families with low incomes are more likely to combine the dining room with the kitchen, leaving the other room for a parlor; as the income rises the living room assumes increased importance, absorbing the dining room when necessary. * * * Much might be written on the psychology of the parlor. Often, particularly in the country, the "best room" has become so lifeless as compared with the kitchen or with a separate living room that it is little more than a mausoleum of family culture. One may not enjoy being there, but the possession of such a room nevertheless tends to elevate the family life.

HOUSING CONDITIONS IN ST. PAUL, MINN.[1]

A preliminary survey of housing conditions in a selected area is now recognized as a first step to the enactment of laws which shall correct evil conditions and establish a better standard of housing. A survey of housing conditions in St. Paul, Minn., has recently

[1] Housing conditions in the city of St. Paul. Report presented to the housing commission of the St. Paul Association by Carol Aronovici, Ph. D., director of Social Service, Amherst H. Wilder Charity. 120 pp.

appeared. Some of the more salient features of that report are here summarized.

Certain districts of the city where conditions were the worst were selected for investigation. The population of these districts numbered 18,425. If there is eliminated from that number 3,548 of mixed and unknown nationalities it appears that 36 per cent were either American or of other nationalities ordinarily considered as of desirable character, i. e., nationalities with high standards of living. Of the total number, 15 per cent were Jews. Considering a total of 3,626 dwellings, 69 per cent were rented by the occupants and 31 per cent owned. The largest percentage of ownership (58) was found among the Bohemians, and the lowest percentage among the English. The highest proportion of renters (87 per cent) was also among the English. In general, home ownership is more prevalent among the Jews, Italians, Germans, and Scandinavians than among the Americans.

Out of a total of 4,248 apartments studied, 44 per cent were one-family houses and 56 per cent multiple dwellings. No great congestion was found in the houses of either class, and while some instances of serious crowding were found they were limited mainly to abnormal dependent families with low standards of living.

Single dwellings were in poor repair in greater proportion than the multiple dwellings, due to the greater proportion of single dwellings of old construction. It is not the habits and standards of life of the people that are responsible for bad housing conditions in St. Paul, Minn., but rather structural defects of new buildings and the low standard of construction observed in the earlier days.

The investigation disclosed that there was no shortage of homes although there is a lack of better-class houses to meet the needs of wage-earning families.

Among the more serious evils may be mentioned the construction of toilets for use in common by from 2 to 10 families. The lodger evil is described as much less acute in St. Paul than in eastern cities.

There was found a considerable amount of bad lighting and ventilation and many dark rooms in the homes covered by the study, largely because of the poor arrangements of lots, the unscientific placement of buildings, the uncontrolled heights of buildings, and absence of regulation regarding distances between walls.

From the statistics collected it would seem that the two-family house represents a better investment than either the single dwelling or the tenement or multiple dwelling.

The report suggests the desirability of securing open spaces for parks and playground purposes within the area covered by its investigation. It points out in this connection that 16 per cent of the land area in the section studied is unoccupied.

The recommendations of the committee embrace suggestions for the drafting of a housing code; the establishment of a housing bureau devoted to the work of removing families to better houses and improved surroundings, keeping in touch with social agencies regarding sanitary conditions, and to act as a means of checking up the work of health inspectors, building and plumbing inspectors, and other officials; the socialization of rent collecting, i. e., the provision of cooperative rent collecting by real estate dealers and agents with a social service worker in charge of the collection of rents; and finally, the creation of a planning and zoning commission in order to provide the city with a careful plan for future growth.

The hotels and lodging houses are given special consideration and attention is called to the lax enforcement of existing laws which in themselves are sufficient if properly administered.

The preparation of this report was under the direction of Dr. Carol Aronovici, and was made possible by the Amherst H. Wilder Charity Foundation. The report is illustrated to show some of the more undesirable conditions found in back yards, toilets, and outhouses.

WAR HOUSING AND THE AMERICAN INSTITUTE OF ARCHITECTS.

The board of directors of the American Institute of Architects at its meeting in Washington, January 17, 1918, adopted the following resolutions:

WHEREAS, It is the belief of the board of directors of the American Institute of Architects that the question of providing within the shortest possible time a supply of workmen's houses such as will reduce the present waste in labor turnover, relieve the intolerable congestion, and provide good living conditions for workers, has for months been the gravest menace to the safety of the Nation and has now become vitally necessary to the victorious conclusion of the War, and

WHEREAS, The manner in which such relief is provided will not only determine the measure of our effort to increase the present volume of industrial production, but will profoundly affect the economic and social life of the Nation in the future; be it

Resolved, That the board of directors of the American Institute of Architects, at their meeting held in Washington on January 17, 1918, submit to the President of the United States, the Congress, the Labor Council, and the Shipping Board the following recommendations as expressing their belief in those essential features which should govern the whole program of industrial housing.

(*a*) The duly constituted authorities should have the right to take land for this purpose.

(*b*) Powers to survey needs for housing facilities and to determine, in cooperation with a central priority board, the relative importance of industrial operations.

(*c*) Powers to design and construct communities where the needs of such have been made evident by the survey.

(*d*) Powers to operate and manage these communities during the War and for a period of years thereafter.

(*c*) Powers to maintain a high standard of physical well-being in munition plants (adopting the standards set by our most progressive industrial corporations) and to organize community activities within the communities thus created; and be it further

Resolved, That as the ultimate disposition of these communities with the least loss and the greatest good to the Nation can not at this time be determined, there be created a commission to consider and report upon the following within a fixed period after the War:

(*a*) The basis upon which such communities could be transferred to municipalities or local limited dividend corporations.

(*b*) The organization of local limited dividend corporations to manage and develop the communities created during the War.

(*c*) The establishment of that part of the cost which should be written off as belonging to the cost of War.

(*d*) The methods of saving the appreciation of land values for the benefit of the community as a whole.

INDUSTRIAL CONDITIONS IN FOREIGN COUNTRIES.

INDUSTRIAL CONDITIONS IN JAPAN, 1915.[1]

From 1907 to 1914, with the exception of 1909, the value of imports in Japan exceeded that of exports. But in 1915 and 1916 exports exceeded imports by 33 and 49 per cent, respectively. Exports in 1907 amounted to 432,412,873 yen ($215,514,576), and in 1916 to 1,127,468,118 yen ($561,930,110), an increase over 1907 of 160 per cent. Imports for these years amounted to 494,467,346 yen ($224,014,525) and 756,427,910 yen ($377,003,670), respectively, an increase of 68.3 per cent. In 1907 the value of exported silk, cotton, and other tissues, yarns, etc., clothing, and accessories was 229,100,134 yen ($114,183,506) and in 1916 579,187,551 yen ($288,667,075), an increase of 152.8 per cent.

Industry has developed in the last few years to a phenomenal degree. The economic conditions resulting from the war have produced a large demand for manufactures. Recent industrial activities have been adequate to the demand. Increased markets have been found, not only in Europe, but in the Far East, Australia, South Africa, and South America. The value of exports to the United States has increased from 125,964,408 yen ($62,751,861) in 1906 to 340,244,817 yen ($169,578,017) in 1916, an increase of 170.2 per cent.

The following table has been prepared to show the relative importance of the various groups of principal manufactures based upon number of employees and value or quantity of products, 1906, 1910, 1915.

[1] The Seventeenth Financial and Economic Annual of Japan, 1917.

NUMBER OF PERSONS EMPLOYED AND VALUE OF PRODUCTION IN SELECTED BRANCHES OF INDUSTRY, 1906, 1910, AND 1915.

Industry.	Number of employees.			Volume or value of products.		
	1906	1910	1915	1906	1910	1915
Cotton yarn	72,313	91,519	124,845	[1] 190,917	[1] 233,117	[1] 352,554
Woven goods (silk, cotton, hemp, and mixed)	792,491	761,309	715,343	$110,918,419	$143,329,952	$189,455,856
Japanese paper	[2] 61,262	[2] 54,917	[2] 47,232	7,718,561	9,859,309	11,162,916
European paper	5,552	6,491	9,032	6,800,857	8,176,569	14,807,220
Matches	24,189	17,985	21,357	7,733,663	6,285,975	11,349,943
Porcelain and earthenware	28,257	30,839	32,302	6,671,573	6,613,766	8,738,072
Mats and mattings	(3)	(3)	(3)	4,836,361	4,801,334	4,035,726
Camphor and camphor oil	[2] 1,617	[2] 2,615	[2] 4,239	349,443	530,492	878,124
Lacquered ware	16,693	17,750	20,101	3,393,907	3,920,305	4,873,360
Straw-plaits, wood-chip, and hemp braid	275,376	337,037	185,455	[4] 2,357,510	[4] 3,278,574	[5] 4,706,646
Knitted goods	(4)	(4)	(4)	3,388,688	4,194,952	15,325,153

[1] Tons.
[2] Number of families.
[3] Not reported.
[4] Not including value of hemp braid.
[5] Including value of hemp braid.

In the preceding table the value of production can hardly be considered as a basis for estimating industrial activities, since values have been largely influenced by the increased prices of manufactured products during 1914 and 1915. Data relative to quantity of articles produced are lacking in many cases, and the only available basis upon which increased activities can be estimated with any degree of correctness is the volume of employment. The quantities of a few articles of manufacture are reported, however, and show in a general way the extent of increased production. The quantity of cotton yarn manufactured increased from 46,188,000 kwan (190,918 tons) in 1906 to 85,288,000 kwan (352,538 tons) in 1915. While the quantity of Japanese paper manufactured in 1915 is slightly below that reported for any year since 1908, the quantity of European paper increased from 107,216 tons in 1906 to 249,254 tons in 1915.

The number of stock and partnership companies engaged in industrial undertakings increased from 2,546, with a paid-up capital of 267,118,424 yen ($133,131,823) and a reserve amounting to 64,521,819 yen ($32,157,675), in 1906, to 5,489 companies, with a paid-up capital of 879,540,314 yen ($438,363,892) and a reserve of 113,383,586 yen ($56,510,379), in 1915.

Wages for the years 1905, 1909, and 1914 are shown in the November issue of the MONTHLY REVIEW, page 149. They have varied but little in 1913, 1914, and 1915, but there has been a gradual increase year by year during the last 10 years.

The following table gives the actual average daily wages of working people and relative wages for 1915, those paid in 1900 being used as a base for computing relative wages.

AVERAGE AND RELATIVE DAILY WAGES OF EMPLOYEES IN SPECIFIED OCCUPATIONS, 1915.

Occupation.	Average daily wages in 1915.		Occupation.	Average daily wages in 1915.	
	Amount.	Relative wages (1900=100).		Amount.	Relative wages (1900=100).
Agriculture, etc.:			House building, etc.—Concld.		
Farm laborer, male	$0.23	153.3	Sawyer	$0.41	156.6
Farm laborer, female	.14	152.6	Shingle roofer	.43	168.6
Sericultural laborer, male	.23	148.1	Tile roofer	.50	171.2
Sericultural laborer, female	.13	142.1	Bricklayer	.52	166.7
Silk spinner, female	.16	165.0	Brickmaker	.37	164.4
Gardener	.41	162.7	Shipwright	.48	153.6
Fisherman	.29	151.2	Floor-mat maker	.39	168.1
Clothing, etc.:			Screen and door maker	.38	151.0
Weaver, male	.23	139.4	Paper hanger	.39	158.0
Weaver, female	.15	150.0	Instruments, etc.:		
Dyer	.26	179.3	Cabinetmaker	.38	154.0
Cotton whipper	.23	127.0	Cooper	.34	158.1
Tailor (for Japanese dress)	.34	176.9	Cartwright	.35	151.1
Tailor (for European dress)	.42	142.4	Harness maker	.36	153.2
Pouch maker	.31	143.2	Lacquerer	.34	146.8
Clog (wooden shoes) maker	.29	147.5	Jeweler	.32	152.4
Shoemaker	.36	155.3	Founder	.35	148.9
Food, drink, etc.:			Blacksmith	.34	143.8
Soy maker	[1] 5.75	185.7	Potter	.33	173.7
Brewery hand	[1] 9.04	166.3	Miscellaneous:		
Confectioner	.23	156.7	Oil presser	.29	163.9
Tobacco cutter	.34	160.5	Paper maker	.22	140.6
Rice pounder	.20	136.6	Compositor	.30	174.3
House building, etc.:			Printer	.27	161.8
Carpenter	.42	155.6	Day laborer	.27	148.6
Plasterer	.42	157.4	Male servant	[1] 2.48	184.1
Stonecutter	.49	160.7	Female servant	[1] 1.56	200.6

[1] Monthly wages.

In 1915 the wages of farm laborers employed under yearly contract differed but little from those paid in 1914. Male farm laborers were paid in these years, on an average, yearly wages of 53.89 yen ($26.84) and 53.70 yen ($26.74) in the respective years, and female farm laborers, on an average, yearly wages of 32.18 yen ($16.03) and 32.53 yen ($16.20) in the respective years. In 1915 the relative figures, taking 1900 as a base, were 167.2 for male, and 190.7 for female laborers.

There were 161,425 operatives and apprentices, and 32,571 laborers employed in Government arsenals, machine shops, steel works, sail lofts, shipyards, etc. The average daily wages of male operatives and apprentices over 14 years of age, in 1915, varied from 56 sen (28 cents) in the printing bureau and forestry office to 81 sen (40 cents) in the military department. Daily wages of female laborers of the same age group, during the same year, varied from 27 sen (13 cents) in the monopoly bureau to 41 sen (20 cents) in the military department.

During the year ending December 31, 1916, the number of cooperative societies increased 244, the increase being confined almost exclusively to credit societies, or societies in which the function of

credit was an important feature. Societies for sale and those in which selling was one of the functions of operations decreased during the year. The different classes of cooperative societies, classified by kind of business for which organized, were shown in the REVIEW for November, 1917, page 150. The number in operation on December 31, 1915, was 11,509, and on December 31, 1916, 11,753.

Accident insurance is reported for 1912–13 to 1915–16. One company with a paid-up capital of 250,000 yen ($124,500) issues this class of insurance only, and two other companies having a combined paid-up capital of 2,500,000 yen ($1,246,000) issue accident insurance in connection with other lines of insurance. The number of contracts in force in 1912–13 was 6,079 and the amount of risk carried amounted to 9,226,040 yen ($4,598,568). In 1915–16 there were 12,602 contracts in force, with risks amounting to 14,847,508 yen ($7,399,998). Receipts have increased from 57,108 yen ($28,463) in 1912–13 for the one company then in operation to 106,029 yen ($52,845) in the year 1915–16, for the 2 companies, and during that period expenses increased from 52,624 yen ($26,228) in the first-named year to 141,531 yen ($70,539) for 1915–16.

The transactions of the post office savings bank show an increase from 5,848,498 deposits, amounting to 54,248,775 yen ($27,015,890), on March 31, 1906,[1] to 12,700,105 deposits, amounting to 226,989,937 yen ($113,131,785), on March 31, 1916. Of the total number of deposits reported in 1916, 4,334,623, amounting to 64,847,974 yen ($32,320,230), were credited to agriculturists, and 933,607 deposits, amounting to 15,801,901 yen ($7,875,667), were credited to operatives. The rate of interest on deposits was increased from 4.2 per cent to 4.8 per cent in April, 1915.

With the exception of 1914, there has been an increase each year in the amount of deposits, and with the exception of 1915 an increase in the number of deposits. During the period covered by the report the amount of deposits credited to operatives has increased nearly 400 per cent, an increase considerably greater than shown by any other class of depositors.

[1] The Sixteenth Financial and Economic Annual of Japan, 1916.

The following table is presented as showing the trend of prices of certain articles of food, etc., for specified years up to 1915:

AVERAGE AND RELATIVE PRICES OF 20 COMMODITIES IN JAPAN, 1906, AND 1912 TO 1915.

Article.	Unit.	Average prices.					Relative prices (1900=100).				
		1906	1912	1913	1914	1915	1906	1912	1913	1914	1915
Rice	Bu	$1.41	$2.06	$2.11	$1.55	$1.25	128	180	185	137	110
Barley	do	.46	.85	.80	.55	.47	97	179	167	116	99
Rye	do	.74	1.29	1.15	.81	.73	123	214	196	135	122
Wheat	do	.87	1.13	1.16	1.09	1.12	112	145	148	140	144
Beans, Soja	do	.97	1.10	1.16	1.16	.92	118	134	141	142	113
Beans, red	do	1.16	1.45	1.61	1.64	1.27	127	158	176	179	138
Salt	do	.52	.50	.48	.52	.46	215	207	199	215	189
Soy	do	2.23	2.40	2.40	2.50	2.40	127	137	136	143	137
Sugar, white, domestic	Lb	.065	.075	.074	.075	.080	135	155	153	156	167
Sugar, white, foreign	do	.061	.080	.079	.080	.083	160	210	200	209	218
Sugar, brown, domestic	do	.045	.056	.055	.055	.056	129	158	157	158	158
Sugar, brown, foreign	do	.040	.057	.055	.055	.056	136	196	190	187	193
Tea	do	.179	.192	.192	.199	.188	130	138	139	144	136
Beef	do	.123	.107	.109	.109	.109	156	136	138	138	138
Eggs	Doz	.139	.157	.166	.166	.155	113	127	134	134	125
Milk	Qt	.119	.113	.113	.113	.110	95	90	90	90	88
Coal	Ton	4.20	3.80	3.99	4.16	3.90	133	120	126	131	123
Petroleum	Box, 2 cans	1.70	1.99	2.16	2.10	2.15	109	115	126	123	126
Charcoal	10 lbs	.048	.065	.068	.067	.066	91	122	128	126	125

Recent strikes are reported to have occurred in Japan, due to the demand of working people for increase in wages owing to the high cost of living.[1] Authentic index numbers show that the cost of living has increased materially since July, 1914. The prices of food and other commodities have advanced 66 per cent over those of that date, and 41 per cent over those of July, 1916. The strikes so far as reported had been short in duration, in most cases settlement being reached by an increase of 15 or 20 per cent in wages. "In the last session of the Japanese Diet an appropriation of 430,000 yen ($214,312) was passed for increasing the wages of postmen, and since then the Government has decided to grant 2,700,000 yen ($1,345,680) for increasing the wages of some 80,000 post-office officials, including postmen."

[1] See Labour Gazette (London), November, 1917, p. 402.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, JANUARY 16, 1918, TO FEBRUARY 15, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between January 15, 1918, and February 14, 1918, in 58 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION JAN. 15, 1918, TO FEB. 14, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Miller Rubber Co. and machinists, Akron, Ohio.	25	2,000	Unable to adjust.
Strike, Washington Tin Plate Co., Washington, Pa	180	.....	Adjusted.
Controversy, plumbers and steam fitters, Camp Park, Ark.	70	1,800	Pending.
Controversy, Charles Kronauer & Co., Harness and Saddlery Works, Chicago, Ill.	80	.....	Do.
Controversy, Durham Coal Co. and miners, Durham, Ga	300	.....	Adjusted before commissioners' arrival.
Strike, Bartle Tent Co., Troy, N. Y	800	.....	Commissioner learned plants closed permanently and contracts canceled.
Controversy, Kansas City Railways Co., Kansas City, Mo.	1,800	.....	Adjusted.
Controversy, Schlueter Manufacturing Co. and sheet-metal workers, St. Louis, Mo.	.....	.....	Pending.
Threatened strike, boilermakers and helpers, contract shops and shipyards, Cleveland, Ohio.	245	2,730	Adjusted.
Controversy, agricultural workers and employers, Porto Rico.	.....	.....	Pending.
Controversy, Pacific Construction & Engineering Co., Seattle, Wash.	69	175	Adjusted.
Threatened strike, packing-house employees, Carstens Packing Co., Armour & Co., and two smaller concerns, Spokane, Wash.	350	500	Pending.
Strike, Pensacola Shipbuilding Co., Bay Point, Pensacola, Fla.	100	.....	Adjusted.
Controversy, Southern California Edison Co	.....	.....	Pending.
Controversy, Wilkes-Barre Street Ry. Co., Wilkes-Barre, Pa.	130	240	Adjusted.
Strike, The Durant Pattern Co., Standard Pattern Works Co., Ideal Pattern Co., Great Lakes Pattern Co., Brost Pattern Co., Superior Pattern Works, General Model Pattern Works, Wellman Pattern Supply Co., and Whaling & Son Co., Edam Pattern Works, and J. Remesch Pattern Works, Cleveland Ohio.	125	25	Do.
Controversy, retail meat markets, Kansas City, Mo	.....	.....	Do.
Strike, metal workers, 18 iron mills, New Orleans, La	6,000	10,000	Do.
Controversy, Southern Railway Co. and clerks (entire system).	.....	.....	Pending.

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, JAN. 15, 1918, TO FEB. 14, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Atlantic Works and Boston Engineering Co. and plumbers, East Boston, Mass.	.....	.....	Commissioner reports controversy is jurisdictional and one that rightfully belongs to their respective unions.
Controversy, Remington Arms Co. and metal polishers, Eddystone, Pa.	.....	.....	Pending.
Strike, Foundry employees, Crown Pipe & Foundry Co., Jackson, Ohio.	60	.....	Adjusted.
Controversy, Textile workers, Fall River, Mass.	30,000	.....	Do.
Controversy, Sturtevant Co. and metal polishers, Boston, Mass.	.....	.....	Pending.
Strike, electrical workers, Detroit, Mich.	400	1,100	Unable to adjust.
Controversy, Ames Iron Co., Oswego, N. Y.	.....	.....	Pending.
Controversy, American Locomotive Co. and machinists, sheet-metal workers, steam fitters, etc., Schenectady, N. Y.	2,500	2,000	Adjusted.
Strike, machinists, Tennessee Coal, Iron & R. R. Co., Ensley, Ala.	.....	.....	Pending.
Controversy, stove manufacturers and metal polishers, Detroit, Mich.	100	200	Adjusted.
Controversy, laborers and helpers, Seaboard Air Line R. R. Co.	.....	.....	Pending.
Strike, Ohio Locomotive Crane Co. and Carroll Foundry & Machine Co., Bucyrus, Ohio.	100	300	Unable to adjust.
Controversy, machinists, Denver, Colo.	.....	.....	Pending.
Lockout, Penn Garment Co., Williamsport, Pa.	38	.....	Adjusted.
Controversy, Chicago & Eastern Illinois R. R. Co. and maintenance of way employees.	.....	.....	Pending.
Strike, Canton Stamping & Enameling Co., Canton, Ohio.	460	40	Do.
Controversy, Jacksonville Terminal Co., Jacksonville, Fla.	70	.....	Do.
Controversy, Woodward & Tiernan Printing Co. and bookbinders, St. Louis, Mo.	.....	.....	Do.
Controversy, street railway employees, St. Louis, Mo.	.....	.....	Adjusted.
Strike, electrical workers, Continental Can Co., Chicago, Ill.	.....	.....	Pending.
Controversy, Nickel Plate R. R. Co. and freight handlers and transfer men, Cleveland, Ohio.	110	.....	Do.
Strike, molders, Nashua, N. H.	.....	.....	Do.
Controversy, meat packers and Master Butchers Association and Butchers' Union, Seattle, Wash.	.....	.....	Do.
Controversy, Bartlett & Haywood, Baltimore, Md.	.....	.....	Adjusted.
Threatened strike, Joplin & Pittsburg Ry. Co., Pittsburg, Kans.	.....	.....	Pending.
Strike, longshoremen, Southern Pacific R. R. Co. and steamship lines, New York.	1,100	2,500	Adjusted.
Controversy, pattern makers, Cincinnati, Ohio.	.....	.....	Pending.
Controversy, Savage Arms Co., Utica, N. Y.	.....	.....	Do.
Controversy, Atchison, Topeka & Santa Fe R. R. Co. and clerks, Chicago, Ill.	.....	.....	Do.
Controversy, Western Gas Co., Fort Wayne, Ind.	.....	.....	Do.
Controversy, Duluth shipyard, Superior, Wis.	.....	.....	Adjusted.
Controversy, Herf & Frerich Chemical Co., St. Louis, Mo.	.....	.....	Pending.
Controversy, Missouri, Kansas & Texas R. R. Co. and clerks, Fort Worth, Tex.	.....	.....	Do.
Controversy, Pennsylvania R. R. Co. and shop employees, St. Marys, Pa.	.....	.....	Do.
Controversy, butchers, Denver, Colo.	.....	.....	Do.
Strike, Grant Smith Shipyards, Portland, Oreg.	.....	.....	Do.
Threatened strike, asbestos workers in entire local asbestos working and insulating industries, Seattle, Wash.	25	50	Do.
Strike, Carstens Packing Plant, Tacoma, Wash.	150	300	Do.
Controversy, Empire Steel & Iron Co., Wharton, N. J.	.....	.....	Do.

The following cases noted in January 14 statement have been disposed of:

Strike, Connecticut Electric Steel Co., Hartford, Conn. Unable to adjust.
Strike, box makers and sawyers, Chicago, Ill. Adjusted.

Threatened strike, Wabash Railroad, railway clerks. Adjusted.

Strike, electrical workers, Casper, Wyo. It developed that power companies claimed they could not afford to pay increases demanded; discontinued wiring business and would not require services of men any longer.

Controversy, Chicago, Terre Haute & Southern Railroad Co., Terre Haute, Ind. Adjusted.

Controversy between Associated Weighmasters' & Scalesmen's Union and United Weighers Association. Adjusted.

Controversy, stationary firemen, Lowell, Mass. Adjusted.

Controversy, Fairbanks, Morse Co. and its pattern makers, Beloit, Wis. Adjusted.

Controversy, American Steel Foundry Co. and iron molders, Granite City, Ill. Adjusted.

Controversy, electrical workers, Pittsfield, Mass. Adjusted.

Controversy, Chicago, Peoria & St. Louis Railroad Co. and mechanical force, Springfield, Ill. Adjusted.

Controversy, Chicago, Burlington & Quincy Railroad Co. and car-service men, Beardstown, Ill. Adjusted.

Controversy, Scholl Manufacturing Co. and metal polishers, Chicago, Ill. Adjusted.

Controversy, Dayton Steel Foundry Co. and molders and car makers Dayton, Ohio. Unable to adjust.

Controversy, Toledo Shipbuilding Co., Toledo, Ohio. Adjusted.

Controversy, Allyne-Ryan Foundry Co. and pattern makers, Cleveland, Ohio. Adjusted.

Controversy, Delta Electric Co., Marion, Ind. Adjusted.

Controversy, Busch-Diesel-Sulzer Manufacturing Co. and pattern makers, St. Louis, Mo. Adjusted.

Controversy, Clark Bros. Co. and molders, Olean, N. Y. Commissioner reports no trouble prevalent at plant of Clark Bros.; company operating harmoniously; manager claims company has all help desired.

Controversy, Nash Motors Co. and pattern makers, Kenosha, Wis. Adjusted.

IMMIGRATION.

IMMIGRATION IN NOVEMBER, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During 1917 the figures for the first three months show a considerable decrease from month to month. The decrease from the preceding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May show a decrease of 48.9 per cent. The figures for June indicate an increase of 5.5 per cent over those for May. During July only 9,367 immigrant aliens were admitted. As compared with figures for July, those for August show an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August the figures for September show a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. The admissions in November numbered only 6,446, a decrease of 30.6 per cent from the number admitted in October. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	[1] 19.9
February	59,156	46,873	13,873	24,740	19,238	[1] 22.3
March	96,958	92,621	19,263	27,586	15,512	[1] 19.4
April	136,371	119,885	24,532	30,560	20,523	32.3
May	137,262	107,796	26,069	31,021	10,487	[1] 48.9
June	176,261	71,728	22,598	30,764	11,095	5.5
July	138,244	60,377	21,504	25,035	9,367	[1] 15.6
August	126,180	37,706	21,949	29,975	10,047	7.3
September	136,247	29,143	24,513	36,398	9,228	[1] 8.2
October	134,440	30,416	25,450	37,056	9,285	.6
November	104,671	26,298	24,545	34,437	6,446	[1] 30.6
December	95,387	20,944	18,901	30,902	.....	.....

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during November, 1916 and 1917, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, NOVEMBER, 1916 AND 1917.

Race.	Admitted.		Departed.	
	November, 1916.	November, 1917.	November, 1916.	November, 1917.
African (black)	729	496	244	156
Armenian	159	30	.....	196
Bohemian and Moravian	43	3	3	68
Bulgarian, Serbian, Montenegrin	76	10	2	252
Chinese	153	112	101	125
Croatian and Slovenian	32	5	15	1
Cuban	154	31	297	125
Dalmatian, Bosnian, Hersegovinian	.....	.....	.....	2
Dutch and Flemish	866	168	46	38
East Indian	9	12	83	4
English	3,604	820	614	1,140
Finnish	942	258	178	77
French	4,642	580	218	412
German	1,342	144	51	39
Greek	2,009	105	131	526
Hebrew	1,908	344	13	33
Irish	2,046	345	219	231
Italian (north)	492	55	561	265
Italian (south)	5,531	130	1,327	2,476
Japanese	741	776	112	131
Korean	15	20	13	5
Lithuanian	72	19	.....	3
Magyar	72	5	12	1
Mexican	1,683	84	56	58
Pacific islander	.....	.....	.....	1
Polish	283	52	5	205
Portuguese	173	58	325	521
Roumanian	40	9	5	9
Russian	408	119	542	196
Ruthenian (Russniak)	94	5	.....	6
Scandinavian	2,576	736	503	140
Scotch	1,516	324	214	259
Slovak	33	2	1	38
Spanish	1,104	350	334	214
Spanish-American	160	127	50	99
Syrian	91	18	7	9
Turkish	102	.....	9	16
Welsh	98	11	20	11
West Indian (except Cuban)	110	71	23	47
Other peoples	329	12	26	10
Not specified	.....	.....	804	.....
Total	34,437	6,446	7,164	8,136

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Safety and Efficiency in Mines. Bulletin 2, May, 1916; Bulletin 3, October, 1916; Bulletin 4, February, 1917, each 15 pp.; Bulletin 5, Relating to safeguarding of a gold dredge, June, 1917, 23 pp.; Bulletin 6, Merit rating California mines for compensation insurance, June, 1917, 36 pp. Tentative safety rules for gold dredges, 1917, 29 pp. Sacramento.*

These bulletins are issued in cooperation with the United States Bureau of Mines. Each of the first three contains a discussion of the causes and prevention of accidents in connection with some particular phase of mining. Bulletin 5 is illustrated, showing methods of safeguarding certain kinds of machinery. There is an outline showing how to introduce a safety campaign through the organization of safety committees. Bulletin 6 aims to present a just and equitable schedule under which merit rating may be done. It is explained that recognition is given the safety work and safety conditions at any mine, and that these factors are rated so that the insurance rate to be paid will depend quite largely on conditions at the mines. Instead of demanding that all minor precautions must be observed, the schedule leaves to the judgment of the operator the decision as to whether certain precautions shall be regarded. If regarded, the rate is reduced; if disregarded, the rate is correspondingly increased.

ILLINOIS.—*Department of Mines and Minerals. Thirty-sixth annual coal report of Illinois. Springfield, 1917. 302 pp.*

According to this report the total tons (2,000 pounds) of coal produced by 810 mines employing 80,893 men and working an average of 179 days during the year ending June 30, 1917, was 78,983,527. This is an increase over 1916 of 6.6 per cent in the number of employees and of 24 per cent in the number of tons produced. Of the employees, 1,527 were boys. Tables of wages paid show that the average price paid per gross ton for hand mining at shipping mines was 70.5 cents as compared with 67 cents in 1916, and for machine mining 56.8 cents as compared with 52.4 cents in 1916. The corresponding rates of wages at local mines were 91.6 cents for hand mining as compared with 74.9 cents in 1916, and 65.5 cents for machine mining as compared with 55.7 cents in 1916. Accident statistics show that during the year 207 lives were lost, 183 being in the mines, 19 on the surface, and 5 in the shafts, and that the number of tons mined to every life lost was 381,563. The fatality rate was 2.56 per 1,000 employees; in 1916 it was 2.17. Injuries to the number of 1,634, each resulting in a loss of 30 or more days, are recorded. The total time lost was 78,947 days, or an average of 57.58 days for each man who returned to work; 263 did not return to work. The number of fatalities was 25.5 per cent greater and the number of injuries was 25.2 per cent greater than during 1916, while the number of men employed, as stated above, was only 6.6 per cent greater.

MARYLAND.—*Industrial Accident Commission. Third annual report for the year November 1, 1916, to October 31, 1917, inclusive. Baltimore [1918]. 51 pp.*

This report is noted on pages 182 to 184 of this issue of the MONTHLY REVIEW.

MASSACHUSETTS.—*Bureau of Statistics. Labor Bulletin 122. Labor legislation in Massachusetts, 1915, 1916, and 1917, with index to bills affecting labor introduced during the session of 1917 and other matters bearing on the labor legislation of the year 1917. (Supplement to Labor Bulletin 104.) Boston, September 1, 1917. 162 pp.*

MINNESOTA.—*State Board of Control. Children's Bureau. Compilation of the laws of Minnesota relating to children, 1917. St. Paul, 1917. 185 pp.*

This compilation is simply a collection of Minnesota laws touching the lives and welfare of children from a social point of view rather than in purely legal and business ways.

NEW YORK (CITY).—*Tenement House Department. Eighth Report, for the years 1915 and 1916. 115 pp. Illustrated.*

Announces in the résumé of 1915–1916 that "the practical elimination of dark rooms in tenements made the year 1915 one of the important periods in the history of the tenement house department." When the problem was first attacked it was found that there were at least 300,000 dark and inadequately lighted rooms. "In 1901 when the department began its work the city death rate was 19.90 per 1,000—to-day it is 13.52." It appears that in 1916 there were 976,397 apartments in tenement houses, the number being increased by about 30,000 a year. During the year 216,429 orders were issued against 38,123 tenement houses found to be violating the law in some particular. In the first week of March, 1916, 5.6 per cent of the apartments were vacant.

PENNSYLVANIA.—*Department of Labor and Industry. Bulletin, vol. 4, series of 1917, No. 7. Harrisburg, 1917. 98 pp.*

Contains a statement of the number of accidents and the amount of accident compensation paid and awarded during the first seven months of 1917, and an analysis of the accidents and compensation costs in the coal mining industry for the year 1916. The bulletin also reviews the operations of the other bureaus of the department for the months of May, June, and July, 1917.

During the first seven months of 1917 there were reported 1,877 fatal and 139,598 nonfatal accidents, and during the same period compensation amounting to $2,889,-639.35 was awarded to dependents of workers killed, while $1,429,353.41 was paid to workers disabled. The corresponding figures for the year 1916 are $2,965,255.72 and $1,259,619.71, respectively.

VIRGINIA.—*Bureau of Labor and Industrial Statistics. Twentieth annual report, 1917. Richmond, 1917. 154 pp.*

States that the value of all products manufactured in the State during the year 1916 was $379,529,528.09, an increase of 34.7 per cent over 1915, the iron and machinery industry being the largest single industry in point of production value—18.4 per cent of the whole. "There are many sources of labor supply, although farm labor is becoming scarce under the present heavy drafts that are being made from other sections. This, however, does not menace the manufacturing interests which will be able for many years to come to recruit from the native population."

For each important industry there is a table showing the highest, lowest, and average daily wages paid in each occupation in 1916.

The report notes a total of 222 prosecutions of offenses against the labor laws during the 11 months ending September 1, 1917, 127 being for violations of the child labor law. During the same period there were 575 accidents (63 fatal) in coal mines, 175 of the accidents being caused by mine cars, including motors and oven lorries. The need of a State workmen's compensation law is suggested. The report closes with a reprint of all State laws affecting labor.

WISCONSIN.—*Industrial Commission. Elevator Code. Revised code effective January 10, 1918. [Madison, 1917]. 22 pp.*

—— —— *Report on allied functions for the two years ending June 30, 1917. [Madison], September 1, 1917. 56 pp.*

Contains a brief report of each of the various activities of the industrial commission. In noting workmen's compensation transactions during the two-year period the report calls attention to the "abnormal increase in claims," the number of accidents reported being 36,575, or an increase of more than 75 per cent over the number reported in the

preceding two-year period. A total of 30,005 cases was settled in which compensation was paid, the indemnity amounting to $2,123,145, and medical aid amounting to $669,373, or an average total benefit of $93.07 per case.

The free employment offices reported that during each of the last two years the calls for help exceeded the applications for work, this being especially true of 1916–17 when employers sought 59,985 workpeople and only 51,727 applied for work. In 1915–16 the number of positions secured was 33,221, and in 1916–17 the number secured was 38,084, this latter figure being 72.8 per cent of those referred to positions. Outside those hired as general laborers and in casual work, both representing 70.4 per cent of the positions secured, the largest number of workers, 6.2 per cent, was placed in logging positions. Private employment agencies secured positions for 14,950 workers.

The activities of the commission along the lines of woman and child labor, minimum wage, mediation and arbitration, safety and sanitation, and factory, boiler, and bakery inspection, are briefly touched upon.

UNITED STATES.—*Congress. House. Committee on Labor. Hearings on H. R. 7353, a bill to employ convict labor for the production of war supplies and to authorize their purchase by the Federal Government, etc.* [*Part 1*] *January 18, 1918, 24 pp. Part 2 February 1, 1918, 57 pp. Washington, 1918.*

The full title of the bill on which these hearings were held is "A bill to employ convict labor for the production of war supplies and to authorize their purchase by the Federal Government; to regulate the compensation and hours of labor and fix standards; to prohibit the purchase of war supplies manufactured by convicts under private contract; to limit the effect of interstate commerce between the States in goods, wares, and merchandise wholly or in part manufactured, mined, or produced by convict labor or in any prison or reformatory; and to equip the United States penitentiaries at Atlanta, Ga., Leavenworth, Kans., and McNeill Island, Wash., and the United States Army prison and disciplinary barracks, and the United States Naval prison, for the manufacture of supplies for the use of the Government, for the compensation of the prisoners for their labor, and for other purposes."

Part 1 includes a statement by Congressman Booher, of Missouri, and one by Grant Hamilton, Federation of Labor, Washington, D. C., both favoring the bill, although the latter stated that "we are not absolutely committed to the exact phraseology of this bill," and that "if any changes can be made and still keep within the spirit of the bill and in harmony with it we are perfectly willing to agree to such changes, although we think the bill has been pretty fairly whipped into shape." There is also a statement by Congressman Church, of California, and one by Dr. E. Stagg Whitten, chairman of the executive committee of the national committee on prisons and prison labor, Washington, D. C., both favoring the enactment of the bill.

Part 2 contains a statement by Edward H. Morrell in behalf of the men and women incarcerated in Federal prisons, his testimony being from personal experience. John J. Manning, secretary-treasurer of the union label trades department of the American Federation of Labor, also submitted a statement favoring the bill. He said:

> We are strictly opposed to Federal or State Governments, or government of any character, incarcerating men for crime and then subletting that responsibility, assumed on taking a man into custody, by selling his labor power to private individuals, firms, or corporations for profit. But we are heartily in accord with the idea that all law violators shall be apprehended, and once apprehended, State or Nation shall shoulder its responsibility by employing such men and women at gainful, educative, manlike and womanlike occupations.

The pamphlet contains an account of the scope of the work of the national committee on prisons and prison labor, with bibliography.

—— *Department of the Interior. Bureau of Mines. Yearbook, 1916. Washington, 1917. 174 pp. Illustrated.*

This bulletin gives a description of some noteworthy safety devices and discusses in fuller detail than the annual report the relation of the bureau's work to the general

problems of safety and efficiency in the mineral industries and the significance of the results that the bureau has been able to achieve. The discussions and descriptions are grouped mostly according to the investigations carried on by the several divisions of the bureau, as follows: Mining, fuels and mechanical equipment, mineral technology, petroleum technology, and metallurgy. To show the need for energetic efforts to reduce the loss of life at mines in the United States the bureau gives a summary of the fatalities in coal mining, from which it appears that since 1870 complete records show that 54,453 men have been killed by accidents while mining coal. The production during this period was 9,838,300,000 tons, and the fatality rate per 1,000 men employed was 3.30, while for every 10,000,000 tons of coal produced, 55 lives were lost, or a production of 180,676 tons for each fatality. That the accident rate is being reduced would seem to be shown by the fact that the fatality rate per 1,000 men employed in 1915 was 2.95, which is said to be the lowest recorded since 1898.

The extent of mine rescue and first-aid training work carried on by the Bureau of Mines during one year is indicated by the following paragraph from the report:

> During the period in which the crews of the bureau's mine safety cars [8 cars] and stations [5 stations] conducted active training in the fiscal year ended June 30, 1916, 62,693 miners visited the cars and stations, 43,060 attended lectures and safety demonstrations, 285 received mine-rescue training, 5,598 were given first-aid instruction, and 2,610 received both first-aid and mine-rescue training, the total number trained being 8,493, which is an increase of 494 over the previous year.

UNITED STATES.—*Eight-hour commission. Commission on standard workday of railroad employees, created by act of Congress approved September 3 and 5, 1916. Report. Washington, 1918. 503 pp.*

This report is noted on pages 136 to 139 of this issue of the MONTHLY REVIEW.

—— *Public Health Service. Mental examination of immigrants: Administration and line inspection at Ellis Island. By E. H. Mullan. Reprint No. 398 from the Public Health Reports, May 18, 1917, pp. 733–746. Washington, 1917. 14 pp. Illustrated.*

Describes the procedure followed by public health officers in examining immigrants at Ellis Island, New York. It is stated that about 15 to 20 per cent of all immigrants are "chalk marked" by the medical officers after the preliminary physical examination, indicating the necessity of a more thorough examination for physical defects. Illustrations are given of methods pursued in examining the mental condition of aliens.

—— —— *Occupation and mortality, their relation, as indicated by the mortality returns in the city of New York for 1914, by Shirley W. Wynne, M. D., and William H. Guilfoy, M. D. Reprint No. 400 from the Public Health Reports, June 8, 1917, pp. 885–902. Washington, 1917. 18 pp.*

An important feature of this report is a table covering five pages, showing deaths by occupations and age groups, in New York City, 1914, the total number of causes of death being 12, besides the group "All other causes," and the number of occupations included being 11, as follows: Blacksmiths; cigar makers and tobacco workers; clerks, bookkeepers, office assistants, etc.; compositors, printers, etc.; garment workers; laborers; machinists; painters, paper hangers, varnishers; railroad track and yard workers; saloon keepers, bartenders, etc.; and teamsters and drivers. It is noted that one difficulty in collecting accurate statistics of this kind is that in many cases persons engaged in a hazardous occupation become ill as a result of such occupation, leave it, and secure employment in one less hazardous, and death, when it results, is tabulated according to the last occupation, though it should have been charged against the previous or more hazardous one. Another and greater difficulty encountered is the absence of accurate knowledge of the number of persons engaged in each occupation, as well as the lack of knowledge of the sex, age, and nationality of the persons in each occupation. Without such knowledge it is hardly possible to compute the mortality rates or to make accurate comparisons of the mortality of the differ-

ent occupations. However, the table indicates those occupations having high mortality from all causes or from some particular cause, from which it may be argued that certain occupations are hazardous to the health and life of those engaged in them. The following table shows for each specified occupation the percentage of incidence of death from each specified cause, by occupations, the number in parentheses in connection with each occupation indicating the total number of deaths upon which the percentages are based:

PERCENTAGE OF DEATH FROM EACH SPECIFIED CAUSE, BY OCCUPATIONS.

Cause of death.	Blacksmiths (139).	Cigar makers and tobacco workers (265).	Clerks, bookkeepers, office assistants, etc. (1,874).	Compositors, printers, etc. (309).	Garment workers (761).	Laborers. (4,805).	Painters, paperhangers, varnishers (610).	Railway, track, and yard workers (301).	Saloonkeepers, bartenders, etc. (396).	Teamsters and drivers (1,172).	Machinists (312).
Pulmonary tuberculosis	15.10	20.38	28.80	33.60	17.08	27.48	22.62	19.27	22.98	35.67	25.65
Cancer	9.30	8.30	4.90	4.80	9.07	4.99	6.56	5.65	3.28	3.24	4.49
Diabetes	1.40	1.51	.....	.....	.....	.....	.33	.....	.....	.....	.....
Alcoholism	2.80	.....	.....	.....	.....	3.16	.98	.....	6.31	2.73	.....
Apoplexy	2.80	.....	1.30	.90	1.97	1.27	[1] 2.62	.66	1.01	1.36	.96
Organic heart disease	15.80	[2] 18.87	14.00	13.60	20.74	13.40	14.92	17.61	[2] 10.10	10.32	14.10
Lobar pneumonia	10.00	5.66	8.50	11.00	7.62	9.88	7.38	11.63	9.09	8.45	8.01
Cirrhosis of liver	2.10	2.64	1.30	1.60	.53	1.58	1.15	1.66	4.54	1.71	1.92
Bright's disease	11.50	10.57	8.60	8.40	8.28	7.83	10.65	7.31	9.60	8.02	7.69
Lead poisoning	.....	.....	.....	.....	.....	.....	1.14	.....	.....	.....	.....
Suicide	2.10	4.15	2.00	.30	3.55	1.12	2.29	2.33	4.04	2.13	2.56
Accident	7.90	3.77	4.50	4.50	3.68	9.08	7.70	11.63	3.03	8.36	7.37
All other causes	18.70	24.15	25.90	21.00	27.46	20.21	21.64	22.26	26.01	18.00	27.25

[1] Cerebral hemorrhage. [2] Heart disease.

The report suggests certain administrative measures which may be promoted by (1) a crusade against pulmonary tuberculosis and the respiratory diseases among clerks, compositors, and similar groups, and a more extensive study of the causes of the high mortality from pulmonary tuberculosis among teamsters and drivers; (2) a widespread effort to control the incidence of heart disease among garment workers and cigar makers; and (3) a campaign against the abuse of alcohol.

OFFICIAL—FOREIGN COUNTRIES.

AUSTRALIA.—[*Department of the Treasury.*] *Invalid and old-age pensions. Statement for the 12 months ended 30th June, 1917* [*Victoria, 1917*], *8 pp.*

States that the number of old-age pensions current on June 30, 1917, was 93,672 or an increase of 2.1 per cent over 1916; and that the number of invalid pensions current on June 30, 1917, was 26,781 or an increase of 14.3 per cent over the preceding year. The following statement shows the extent of invalid and old-age pensions transactions during the year ending June 30, 1917, as compared with the preceding year:

INVALID AND OLD-AGE PENSIONS TRANSACTIONS IN AUSTRALIA DURING THE YEARS ENDING JUNE 30, 1916 AND 1917.

Item	Year ending June 30—		Per cent of increase.
	1916	1917	
Number of old-age pensioners	91,783	93,672	2.1
Number of invalid pensioners	23,439	26,781	14.3
Amount paid in pensions	$13,917,051.24	[1] $17,125,150.24	23.1
Amount paid to benevolent asylums for maintenance of pensioners	$154,905.56	$171,047.74	10.4
Total payments to pensioners and benevolent asylums	$14,071,956.80	[1] $17,296,197.98	22.9
Cost of administration	$216,077.47	$264,703.53	22.5
Cost of administration per each $100 of pensions and asylum payments	$1.54	$1.53	.....
Annual liability on last day of financial year	$14,114,563.01	[1] $18,547,204.80	31.4
Average fortnightly pension on last day of financial year	$4.70	$5.90	25.5
Number of old-age pensioners in each 10,000 of population	186	192	3.2
Number of invalid pensioners in each 10,000 of population	48	55	14.6

[1] Includes payments at rate of 2 s. (48.7 cents) per week to pensioners in benevolent asylums.

AUSTRALIA.—[*Department of the Treasury.*] *Maternity allowances. A statement of claims granted and rejected, expenditures, and cost of administration during the 12 months ended 30th June, 1917. Melbourne, 8th August, 1917. 3 pp.*

It is shown in this report that allowances were granted in 132,407 cases, and rejected, for one cause or another, in 459 cases. The total amount paid to mothers was £662,035 ($3,221,793.33) or an average of $24.33 per case; and the total cost of administration was £13,735 ($66,841.38) or an average of £2 1s. 6d. ($10.10) for each £100 ($486.65) of maternity allowance paid.

—— *Manual of Emergency Legislation. Comprising all acts of Parliament, regulations, proclamations, orders, etc., relating to and made in consequence of the war. Melbourne, January, 1916. 540 pp. Price, 7s. 6d.*

—— (QUEENSLAND).—*Registrar general's office. A B C of Queensland statistics, 1917. Brisbane, 1917. 46 pp.*

A statistical abstract for 1917 prepared by the Government statistician under the direction of the home secretary.

—— (SOUTH AUSTRALIA).—*Report of chief inspector of factories for the year ended December 31, 1916. Adelaide [1917]. 11 pp.*

States that at the end of 1916 there were 1,892 factories registered (42 less than the preceding year), in which 18,663 workers were employed (23 more than the preceding year), 1,458, or 7.8 per cent, of these being children between the ages of 13 and 16 years. The report notes 116 accidents, 3 being fatal and 76 being injuries to hands and arms. About 45 per cent of the accidents were in iron foundries and other metal-working factories. The wages paid indicate an all-round average increase of approximately 4.25 per cent on the rates paid during the previous year and in some cases the increases average as high as 17 per cent. Increases noted are biscuit manufacture, 17 per cent; boots and shoes, 16 per cent; slaughtermen and butchers' drivers, 14 per cent; hardware trade, 13 per cent; galvanized iron workers, etc., 12 per cent; monumental masons, 11 per cent; butchers, 10 per cent; builder's laborers, 10 per cent; aerated waters, etc., 9 per cent: and carpenters, carriage building, and furniture manufacture, 8 per cent.

"With the exception of work connected with the building trades employment was fairly plentiful, and trade has been good generally during the past year." Average weekly earnings of boys under 16 years of age ranged all the way from 8s. ($1.95) paid to boys working as tanners and curriers to 30s. 6d. ($7.42) paid to boys working in flour mills; while the average earnings of girls under 16 ranged from 4s. 9d. ($1.16)

paid to those working at dressmaking to 15s. 10d. ($3.85) paid to those working in hardware factories.

CANADA.—[*Census and Statistics Office.*] *The Canada Yearbook, 1916–17. Ottawa, 1917. 720 pp.*

Several items in this book are of interest to labor. During the fiscal year ending March 31, 1917, the number of immigrant arrivals was 75,374 as compared with 48,537 during the preceding year, an increase of 55.3 per cent. About 81 per cent were from the United States. During 1916, in accidents resulting from the movement of trains, locomotives, or cars, 437 persons were killed and 2,058 were injured, while 31 were killed and 2,920 were injured in other railroad accidents. In addition to these, 50 persons were killed and 3,029 were injured on electric railroads. There were 75 labor disputes during 1916, as compared with 43 in 1915. The 75 strikes involved 271 employers and 21,157 workpeople, with resultant time loss to the latter estimated at 208,277 work days, or an increase of 102,128 (96.2 per cent) days over the preceding year. The largest number of strikes (19) was in the transport industry, while the largest time loss (88,634 days, or 42.6 per cent of the total) occurred in the mining industry, which had 10 strikes. As to the matter of caring for the returned disabled soldiers and giving them training in their old occupations, or in a new vocation if unfitted to pursue their former work, the report makes the following statement of the work of the military hospitals commission:

The following matters are now dealt with by the commission: Hospitals for sick and wounded, convalescent homes, sanatoria for the tuberculous, care of the insane, treatment of men suffering from shell shock, manufacture of artificial limbs, reeducation or vocational education of men who pass through the hospitals, finding of employment for discharged men. All men passing through the commission's institutions are required to take some educational course unless excused on medical grounds. Men whose disability, caused or aggravated by service, prevents them from resuming their former trade may claim free training for a new occupation. About 1,500 such applications have been approved up to the end of November, 1917. * * * In finding employment for discharged men the commission is assisted by a commission or committee in each Province. The number of men receiving care and treatment under the commission was 10,953 on November 15, 1917. Returned soldiers have been divided into three classes, viz, (1) men for immediate discharge without pension; (2) men whose condition may be benefited by further medical treatment or rest in a convalescent home, hospital, or sanatorium; and (3) men having permanent disability which would not be benefited by further medical treatment, and whose cases are considered by the pensions board with a view to pension. Up to March 31, 1917, the number of men returned was 13,826, of whom 2,891 were of class 1, 9,125 were of class 2, 828 were of class 3, 864 were men not classed as invalids, and of 119 there was no record. The total had increased by October 31, 1917, to 29,092, of whom 18,099 were invalids coming under the care of the commission. In May, 1917, the various institutions available or under construction throughout Canada numbered 110, providing accommodation for 14,949 cases. At the end of September, 1917, there were 113 institutions in use, of which 71 were operated by the commission, 21 were new centers provided, and 45 were remodeled during the year 1917.

—— *Commission of Conservation. Urban and rural development in Canada. Report of conference held at Winnipeg, May 28–30, 1917. Ottawa, 1917. 98 pp.*

The subjects of papers presented at this conference are: Municipal problems of the western Provinces, by Hon. W. J. Armstrong, municipal commissioner of Manitoba; Municipal Finance and Administration, by Dr. H. L. Brittain, director Bureau of Municipal Research, Toronto; and one on the same subject by C. J. Yorath, city commissioner, Saskatoon; Municipal and Vital Statistics, by R. H. Coats, Dominion statistician and controller of census; Rural Production and Development, by Dr. James W. Robertson; Civic Efficiency and Social Welfare in Planning of Land, by W. F. Burditt, chairman, St. John, N. B., Town Planning Commission; Planning and Development of Land, by Thomas Adams, town planning adviser, Commission of Conservation. A special session was devoted to a discussion of the problem of the returned soldier.

CANADA.—*Department of Secretary of State. Proclamations, orders in council, and documents relating to the European war. Fourth supplement. Ottawa, 1917. cxliv, 1952–2439, 538–964 pp.*

—— *Military Hospitals Commission. Reconstruction. Bulletin, January, 1918. 22 Victoria Street, Ottawa. 16 pp. Illustrated.*

This bulletin, entitled "Reconstruction," is published "for the information of all interested in the welfare of Canada's returned soldiers," for, as stated on the front cover, "the cold figures of enlistment indicate the magnitude of the work of reconstruction—reconstruction of those who are maimed, and reconstruction of our industrial and social organisms to make place for the men returning during and after the war." Whether or not this bulletin is to be published regularly does not appear, nor is there any indication that this January number is or is not the first issue. There are several special articles, one of which describes Canada's method of manufacturing artificial limbs and fitting them to soldiers who have lost their limbs in battle.

GREAT BRITAIN.—*Ministry of Labor. Industrial councils. The Whitley report, together with the letter of the Minister of Labor explaining the Government's view of its proposals. Industrial Reports, No. 1. 1917. 19 pp. Price, 1d.*

This report is noted on pages 81 to 84 of this number of the MONTHLY REVIEW.

—— *National Health Insurance Joint Committee. The statutes, regulations, and orders relating to national health insurance, with notes, cross references, and an index. London, 1917. 679 pp. Price 2s. 6d. net.*

Contains the text of the National Insurance Acts, 1911–1915, together with sections of other statutes as affecting national health insurance; a table showing the various regulation-making and order-making powers given by the acts, and the manner in which those powers have been exercised; and the text of all the regulations and orders made by the joint committee and the four bodies of commissioners which are now in force.

SWITZERLAND.—*Statistischen Bureau des schweizerischen Finanzdepartements. Statistisches Jahrbuch der Schweiz, 1916. Vol. 25. Berne, 1917. 288 pp.*

The twenty-fifth volume of the official statistical yearbook of Switzerland for the year 1916, containing statistical data usually shown in publications of this kind. Of interest to labor are the data showing the number of industrial establishments subject to factory inspection, and the data relating to wholesale and retail prices and to cost of living.

UNOFFICIAL.

AMERICAN ACADEMY OF MEDICINE. *Medical Problems of Legislation. Being the papers and discussions presented at the 41st annual meeting of the American Academy of Medicine, held at Detroit, Mich., June 9–12, 1916. Easton, Pa., 1917. 234 pp.*

The 18 papers (not including the president's address) in this volume are grouped under four general heads, namely: Legislation affecting the entrance upon the practice of medicine; Legislation affecting the status and duties of physicians; Industrial legislation; Legislation for care of exceptional cases.

AMERICAN FEDERATION OF LABOR. MASSACHUSETTS BRANCH. *Proceedings of the thirty-second annual convention, Lawrence, September 10–13, 1917. 108 pp.*

AMERICAN INDUSTRIAL COMMISSION TO FRANCE. *Franco-American Trade. Report to the American Manufacturers Export Association by the American Industrial Commission to France, September–October, 1916. Redfield-Kendrick-Odell Co., New York, [1917]. 256 pp. Illustrated. Maps.*

The American Industrial Commission, organized and conducted under the auspices of the American Manufacturers Export Association, went to France "to ascertain how American resources might best be made available for the reconstruction of the devastated regions, and with a hope of furthering Franco-American trade relations." Some of the subjects touched upon in the report are the following: Trade and tariff, Industrial machinery Labor, Syndicates and cooperative societies, Social welfare,

City planning, General and technical education, and Belgian reconstruction. The summary states that the keynote of every interview was the insistence upon complete reciprocity between the two countries.

BARTON, GEORGE EDWARD. *Reeducation—an analysis of the institutional system of the United States. Boston and New York, Houghton Mifflin Co., 1917. 119 pp.*

The author declares in his preface that he has no quarrel with the church or the hospital or with any other institutions that are working for the good of humanity, but adds that "a number of years spent in practical work along lines of education and of social betterment, combined with years spent in the meeting of industrial conditions necessitated by the practice of architecture, so unite as to make me believe that there are some fundamental weaknesses or fallacies in our present system of dealing with education, sin, insanity, and disease."

It seems to be the purpose of the author to point these out with a note of caution to business men who are constantly called upon for contributions to aid institutions of various kinds. It is his declared belief that there must be a limit somewhere to the amount of time, energy, and money which can be expended by a State or an individual, however rich, and he aims to show that "there must be a relation between the amount which can be spent for any purpose, however praiseworthy, and the total production of a people."

BREND, WILLIAM A. *Health and the State. London, Constable, 1917. 354 pp.*

An important book, outlining a scheme for complete reorganization of the public health services of Great Britain, both central and local, the most important function assigned to a ministry of health being that of investigating the causes and distribution of disease, while actual administration of public health measures is left to local authorities provided with increased powers. The chapters are: 1. The sanction of the State to safeguard the national health; 2. Nature and disease; 3. Infant mortality and its problems; 4. Disease and defects in children and adults; 5. Public health, land, and housing; 6. Medical treatment among the working classes; 7. Public health and the National Insurance Act; 8, Public health and fraud; 9. The complexity of public health administration; 10. The need for a ministry of public health; 11. Public health and local administration. The author is lecturer on forensic medicine in Charing Cross Hospital, London.

CARLE, M. *Les Écoles professionnelles de blessés. Paris, Bailliére & Sons, 1915. 132 pp. Illustrated.*

An account of vocational reeducation and employment of disabled soldiers in France, with a comparison of the relative advantages of various reeducation methods, and a detailed account of the work of the special schools.

CARPENTER, EDWARD. *Towards Industrial Freedom. London, George Allen & Unwin; New York, Charles Scribner's Sons, 1917. 224 pp.*

A collection of papers written before the war broke out, the first paper sketching "the evils which arose from the industrial arrangements of the early part of the last century, and the reforms into which these evils forced us," and subsequent papers indicating what transformations may be expected in the future. These transformations, it is felt, will be largely psychological in character—that is, dependent upon a changed mental attitude toward life and a changed estimate of values, even more than on a change in institutions. "Over and beyond any formulas of reform what is needed is a new spirit of social and industrial life. Without that even the best institutions will be of little avail." Carrying out this thought the author introduces chapters on industry as an art, beauty in everyday life, nongovernmental society, agricultural cooperation, the village and the landlord, and British aristocracy and the House of Lords. The concluding chapter is on social and political life in China.

COLLIE, JOHN, M. D. *Malingering and feigned sickness, with notes on the Workmen's Compensation Act, 1906, and compensation for injury, including the leading cases thereon. London, Edward Arnold, 1917. 664 pp. Illustrated. Second edition, revised and enlarged.*

This important work, by a leading authority on the subject, has practically been rewritten since its first appearance in 1913, a number of chapters having been added and others revised. Sir John Collie has devoted himself to this class of work for the past 11 years, during which time he has conducted over 31,000 examinations of alleged sickness or accident. In this book he formulates certain theories with regard to malingering, exemplifying them with typical cases from his own experience, and offers tests for discovering and remedies for dealing with the deceiver and the exaggerator. Important chapters are: Military malingering; Medical aspect of the Workmen's Compensation Act, 1906; Workmen's Compensation Act, 1906, and scheduled diseases; The effect of recent legislation upon sickness and accident claims; and The National Insurance Acts, 1911 and 1913.

CURTIS, HENRY S. *The play movement and its significance. New York, Macmillan, 1917. 346 pp. Illustrated.*

The author's aim in this volume has been to give a concrete picture of the extent of the development of play in this country, the sources from which the movement has sprung, and the direction in which it is going.

DEACON, J. BYRON. *Disasters, and the American Red Cross in disaster relief. Social Work Series. New York, Russell Sage Foundation, 1918. 230 pp.*

The author here aims to give an account of the methods and technique that have been developed by the American Red Cross in carrying on its disaster relief work in order to furnish a profitable guide to all who may be called upon to undertake like responsibilities. A plea is made for the fullest possible measure of preparedness in advance of public calamities. The study is limited to calamities which have occurred within the borders of the United States during the last 12 years and to relief operations following thereafter in which the Red Cross has had a part. A detailed outline of the method of organizing relief work is given.

FOX, R. FORTESCUE, M. D. *Physical remedies for disabled soldiers. London, Baillière, Tindall & Cox, 1917. 277 pp. Illustrated.*

In three parts: I. Hydrological remedies and the indications for their use; II. Mechanical and electrical remedies; III. The provision for physical remedies. Maj. R. Tait McKenzie, of the University of Pennsylvania, contributes a chapter on Mechanical treatment and remedial exercises; Dr. F. Hernaman-Johnson, of Cambridge Hospital, Aldershot, a chapter on Electrical treatment of military cases; and Dr. J. B. Mennell, Military Orthopedic Hospital, Shepherd's Bush, a chapter on Clinical uses of massage.

GILBRETH, FRANK B. AND L. M. *Applied motion study: A collection of papers on the efficient method to industrial preparedness. New York, Sturgis & Walton, 1917. 220 pp. Illustrated.*

This book aims (1) to describe motion study as applied to various fields of activity and (2) to outline the principles and practice of motion study in such a way as to make possible its application in any and all kinds of work. It includes a chapter on motion study for the crippled soldier.

—— *Measurement of the human factor in industry. 1917. 14 pp. Privately printed.*

An address before the National Conference of the Western Efficiency Society. Devoted mainly to a consideration of the problem of reeducating and utilizing the war cripple.

—— *Motion study for crippled soldiers. 1916. 8 pp. Privately printed.*

On the use of the motion chart to suggest changes in the method of doing work so that it may be performed by cripples.

GILBRETH, FRANK B. AND L. M. *The conservation of the world's teeth: A new occupation for crippled soldiers. Reprinted from the July, 1917, number of The Trained Nurse and Hospital Review.* [7 pp.] *Illustrated.*

Describes and advocates the profession of dental nursing and the cleaning of teeth—at present neglected because of the expense of having such work done by a trained expert—by crippled soldiers.

GOLLANCZ, VICTOR, ed. *The making of women. Oxford essays in feminism, by A. Maude Royden, Ralph Rooper, Eleanor F. Rathbone, Elinor Burns, The Round Table, and Victor Gollancz. London, George Allen & Unwin, and New York, Macmillan, 1917. 217 pp.*

An attempt to frame "an unified feminist policy" and to suggest the lines on which feminism should develop. In Miss Rathbone's essay on "The remuneration of women's services" it is suggested that equal pay for equal work, considered as an immediate policy, is unsound. The other side of this question is presented in a reprint, as Appendix A, of an article on the same subject which appeared in The Round Table of March, 1916.

HANNA, HUGH S., AND LAUCK, W. JETT. *Wages and the war: A summary of recent wage movements. Cleveland, Ohio, 1918. Doyle & Waltz Printing Co. 356 pp. Charts.*

This study is noted on pages 134 and 136 of this number of the MONTHLY REVIEW.

HEY, SPURLEY. *Development of the education of wage earners, with special reference to the education of older boys and girls. London, Oxford University Press, 1917. 16 pp. Price, fourpence. Barnett House Papers No. 2.*

Every year about 200,000 children leave the English elementary schools at 13 years of age, and many of these enter blind-alley employment. The present study deals briefly with the problem of the education and employment of wage-earning children under the following heads. I. The present position; II. The existing means to meet this position; III. The urgent necessity—the last named including a scheme for reform.

HOAGLAND, H. E. *Wage bargaining on the vessels of the Great Lakes. Urbana, Ill., 1917. 123 pp. University of Illinois Studies in the Social Sciences, Vol. VI, No. 3.*

Formerly the wage earner identified his interest with that of his employer. Later he banded with his fellow workers into unions for the purpose of bargaining with the employers. More recently he has had the terms of his labor contract dictated by the same corporation which dominates the management of the physical property involved in lake traffic.

HOBSON, J. A. *Democracy after the war. London, George Allen & Unwin, 1917. 215 pp.*

The war has done good service "by lighting up the country and bringing out in clear relief the full alliance of reactionary forces with which democracy is called upon to deal." In Part I the author discusses the enemies of democracy, his object being "to show the unity of the apparently unrelated reactionary forces, and thereby to reveal the necessity of coordination among the forces of democracy." Part II, entitled "The defence of democracy," is divided as follows: 1. How to break the vicious circle; 2. The new economic situation; 3. Two problems for labor; 4. The conquest of the State; 5. The close State versus internationalism.

HUTT, C. W. *The future of the disabled soldier. London, T. Fisher Unwin, 1917. 199 pp. Illustrated.*

The chapters of this book are as follows: I. Arrangements for treatment: II. Training of the disabled abroad; III. Training of the disabled in the United Kingdom; IV. Occupation and physical defect; V. Employment of the disabled in the United Kingdom. In the seven appendixes are discussed special facilities, suitable occupations, training classes, etc. Various artificial appliances are described. From the beginning of the war (August, 1914) up to May 31, 1916, the causes of discharge from

the British Navy and Army included 4.1 per cent wounds and injuries to legs necessitating amputation, 2.5 per cent wounds and injuries to arms or hands necessitating amputation, and 1.2 per cent cases of frost bite which included amputation of feet or legs. These proportions, it is stated, had changed but little, if at all, by the beginning of March, 1917.

INSTITUT INTERNATIONAL D'AGRICULTURE. *Annuaire international de législation agricole. VIème Année, 1916. Rome, 1917. 1458 pp.*

This is a compilation, from official sources, of agricultural legislation enacted in all countries during the year 1916, with an analytical introduction in English. The text is in French.

Laws have been arranged under 10 general heads, as follows: I. Relative to agricultural census returns, including production and area under cultivation; II. Commercial regulations (supplies and consumption); III. Excise duties and taxes; IV. Promoting the cultivation of waste or abandoned lands, and measures intended to increase production; V. Promoting increased production of livestock, and regulating consumption of meat; VI. Agrarian organizations and agricultural education; VII. Plant diseases, weeds, and pests, and animals noxious to agriculture; VIII. Farm credits; IX. Land grants, etc.; X. Agrarian contracts.

JAFFRAY, JULIA K., ed. *The prison and the prisoner. Boston, Little, Brown & Co., 1917. 216 pp.*

A symposium by various authorities, edited by the secretary of the National Committee on Prisons and Prison Labor. Includes Industrial training for the prisoner, by Arthur D. Dean, director of agricultural and industrial education, New York State Department of Education, and The union man and the prisoner, by Collis Lovely, vice president of the International Boot and Shoe Workers' Union.

JENKS, JEREMIAH WHIPPLE. *The trust problem. New York, Doubleday, Page & Co., 1917. 499 pp. Charts. Fourth edition, enlarged and completely revised.*

Revised with the collaboration of Walter E. Clark, professor of economics, College of the City of New York.

KELLOGG, VERNON, AND TAYLOR, ALONZO E. *The food problem. New York, Macmillan, 1917. 213 pp.*

The authors present the food problem in two parts, the problem and the solution, and the technology of food use. They review the food situation of the Western Allies and the United States, give an outline of the work and purpose of the United States Food Administration, tell how England, France, and Italy are controlling and saving food, with a chapter on food control in Germany and its lessons, and emphasize the international character of the food problem and how it must be met if the war is to be won. There is an introduction by Herbert Hoover, United States Food Administrator.

LEWIS, BURDETTE G. *The offender and his relations to law and society. New York and London, Harper, 1917. 382 pp. Illustrated. Harper's Modern Science Series.*

An attempt to show how the correctional system of a State should be developed, and from what point of view its various correctional institutions should be managed. The author is commissioner of correction of the city of New York.

MACIVER, R. M. *Community: A sociological study. Being an attempt to set out the nature and fundamental laws of social life. London, Macmillan, 1917. 437 pp.*

MANCHESTER STATISTICAL SOCIETY. *Transactions, 1916–17. Manchester (England), John Heywood, 1917. 111 pp.*

Includes the following papers: The case for a guild of shippers, by Barnard Ellinger; Economics after the war, by A. W. Kirkaldy; Education after the war, by the Right Rev. Bishop Welldon; The quantity theory, with some reference to bank reserves, by W. Howard Goulty; State purchase of the liquor trade, by R. B. Batty.

MAYOR'S COMMITTEE ON NATIONAL DEFENSE (NEW YORK CITY). *Committee on Industry and Employment. Report, December 21, 1917. 44 pp.*

The most important conclusion brought out in this report is the need for the establishment of a Federal employment service as a "war necessity." The report devotes considerable space to tracing the development of public employment work in New York State and city from the time of the first active demand for such work between 1885 and 1890 and the subsequent passage of laws in 1888 and 1891 regulating private bureaus in Manhattan and Brooklyn and the establishment of a public bureau in Manhattan in 1896, to the establishment and work of the clearing house for employment offices as conducted since October, 1917, under the State defense council. The committee submitting this report was appointed in June, 1917, and states as its purpose a desire to summarize the experience gained during the course of its activity and to make it available to others who may be called upon to deal with the problem of employment.

It should be stated in this connection that since the report was prepared the United States Employment Service has been organized in the Department of Labor, an account of which appears on pages 76 to 78 of this issue of the MONTHLY REVIEW.

NATIONAL ASSOCIATION FOR THE ADVANCEMENT OF COLORED PEOPLE. *Freeing America. Seventh annual report. 70 Fifth Avenue, New York, 1917. 16 pp.*

NATIONAL CONFERENCE OF SOCIAL WORK. *Proceedings of the forty-fourth annual session, Pittsburgh, June 6–13, 1917. Chicago, 315 Plymouth Court, 1917. 675 pp.*

Contains the valuable material on social problems always to be found in the proceedings of this association, known formerly as the National Conference of Charities and Correction. Part II is devoted to social problems of the war.

NATIONAL LEAGUE ON URBAN CONDITIONS AMONG NEGROES. *A challenge to democracy. The migration of a race. Annual report 1916–17. Bulletin, Vol. VII, No. 1, November, 1917. Headquarters, 2303 Seventh Avenue, New York. 35 pp.*

The following foreword by the president of the association sets forth the problems which constitute "a challenge to democracy":

"The problem of adjusting the relations of two races of the same nationality but with widely differing instincts; the problem of adjusting men raised in agricultural communities, who are suddenly faced with the complications of city life and the intense demands of highly organized industrial conditions; the problem of providing suitable working, living, and recreation conditions which will help in the preservation of health, morals, and happiness, as the negro endeavors to make his contribution to the great forces of democracy—these are the problems which face our country to-day, and they are difficult problems even if faced without prejudice."

The pamphlet presents a review of the work done by the organization in various cities as far west as Detroit and St. Louis.

NATIONAL SAFETY COUNCIL. *Sixth Annual Safety Congress. Proceedings (part 5) Governmental Sectional Meeting. Hotel Astor, New York City, September 14, 1917. Chicago [1917]. 533–593 pp.*

Contains the addresses delivered at the governmental sectional meeting of the sixth annual safety congress of the National Safety Council, held at the Hotel Astor, New York, September 14, 1917, the titles of the addresses being: Safety in United States Government Work, by C. W. Price, field secretary, National Safety Council, Chicago; Dope poisoning in the manufacture of airplane wings, by Alice Hamilton, M. D., United States Bureau of Labor Statistics, Washington (published in the MONTHLY REVIEW for October, 1917, pp. 18–25); Uniform standards for the manufacture and transportation of high explosives, by L. L. Bryant, Commissioner of Labor, Trenton, N. J. (published in the MONTHLY REVIEW for January, 1918, pp. 167–176). A brief account of the sixth annual safety congress was given in the MONTHLY REVIEW for October, 1917, pages 147 and 148.

PHILLIPS, MARY E. *War-time food for women workers. Manchester [England], 1916 15 pp. Price 2½ d.*

Opening with a general discussion of "food and fitness," the author then presents a chapter on "nourishing food for a shilling a day," in which is given a table setting forth scientifically the food requirements of two women of average weight, in normal health, and taking a moderate amount of exercise; and chapters giving suggestions for daily menus, together with recipes for preparing some of the dishes.

RAMSAY, ALEX. *Terms of industrial peace. London, Constable, 1917. 144 pp.*

Considers the relations of capital and labor and suggests a means by which the two may be "brought into cooperation for their mutual interest and the good of the community." Appears to be, as the author claims it is, "a very sincere attempt to approach the subject from a strictly neutral standpoint."

RAND SCHOOL OF SOCIAL SCIENCE. *The American Labor Yearbook, 1917–18. 7 East Fifteenth Street, New York, 1918. 384 pp.*

In this volume is recorded the progress of the labor and socialist movement in the United States and abroad during 1916 and 1917, supplemented by a series of articles on important social and economic questions. There are six parts: Labor and war; The labor movement in the United States; Labor and the law; Social and economic conditions; The international socialist, labor, and cooperative movements in various countries; and The socialist movement in the United States.

RED CROSS INSTITUTE FOR CRIPPLED AND DISABLED MEN. *Publications, Series I, No. 1, A bibliography of the war cripple. Compiled by Douglas C. McMurtrie. January 4, 1918. 41 pp. No. 2, The economic consequences of physical disability; a case study of civilian cripples in New York City. By J. C. Faries. January, 1918. 11 pp. No. 3, Memorandum on provision for disabled soldiers in New Zealand. By Douglas C. McMurtrie. January 26, 1918. 7 pp. 311 Fourth Avenue, New York City.*

An extended digest of publication No. 2, The economic consequences of physical disability, appears on pages 92 to 96 of this issue of the MONTHLY REVIEW.

ROCKEFELLER FOUNDATION. *Annual report, 1916. New York, 61 Broadway, 1917. 458 pp. Illustrated.*

SCOTT, WILLIAM ROBERT. *Economic problems of peace after war. The W. Stanley Jevons lectures at University College, London, in 1917. Cambridge (England), University Press, 1917. 122 pp.*

An outline of the general appearance which economic life may assume after the war, and an indication of the course which progress may be expected to take, prepared in the belief that "something may be accomplished in applying general principles based upon the teaching of economics or on the experience of somewhat similar conditions in the past, or, again, upon known dispositions of human nature."

The essays are as follows: The economic man and a world at war, "For the duration of the war," Communications of a maritime State, The surprises of peace, Saving and the standard of life, and Organization reorientated. Some statistics of shipping during earlier wars are given in an appendix.

SECRIST, HORACE. *An introduction to statistical methods: A textbook for college students; a manual for statisticians and business executives. New York, Macmillan, 1917. 482 pp.*

"An attempt to work out an introductory, but at the same time a comprehensive, text on statistical methods for the use of college students and students in colleges of business administration," by the associate professor of economics and statistics of Northwestern University.

SEYBOLT, ROBERT FRANCIS. *Apprenticeship and apprenticeship education in Colonial New England and New York. New York, 1917. 121 pp. Bibliography. Teachers' College, Columbia University, Contributions to Education, No. 85.*

English gild and municipal legislation of the thirteenth and fourteenth centuries determined the practice of apprenticeship in the American colonies. This book gives

a somewhat detailed account of the English system and describes its reproduction and continuation in Colonial New England and New York.

SHEPARD, GEORGE H. *The application of efficiency principles. New York, Engineering Magazine Co., 1917. 368 pp. Illustrated. Industrial Management Library.*

An attempt to meet the need for a book explaining "how to apply efficiency principles, as a sort of a supplement to Harrington Emerson's statement of these principles in his book."

THOMPSON, C. BERTRAND. *The theory and practice of scientific management. Boston, Houghton Mifflin, 1917. 319 pp. Bibliography.*

The three most important divisions of this work deal respectively with scientific management in practice, its economic aspects, and its literature. The author is strongly in favor of scientific management, and believes that it represents "an inevitable and irresistible tendency, and that therefore its extension and permanence are assured." At the time of writing, the total number of applications of the theory definitely known to him was 212, with an uncertain number of others about which information was indefinite. The statement is made that "only slightly more than one per cent of the plants in the United States large enough to warrant its development have undertaken it." The obstacles to its development include the conservatism and mental inertia of business managers, the cost of the best-known systems, the scarcity of engineers, and the distrust of social workers and opposition of organized labor.

UNIVERSITY OF PENNSYLVANIA. *Machinery and its benefits to labor in the crude iron and steel industries. By Charles Reitell. The Collegiate Press, Menasha, Wis., 1917. 36 pp. Illustrated.*

In this thesis presented in partial fulfillment of the requirements for the degree of doctor of philosophy, the author gives the results of a study of 25 blast furnaces and 38 open-hearth furnaces located in Eastern Pennsylvania and in Maryland, in which he considers four factors: (1) The nature of the mechancial processes introduced; (2) the number of employees added or displaced by the new invention; (3) the machine as regards the problem of safety; (4) the higher or lower type of worker demanded as measured by (*a*) physical requirements, (*b*) mental control and intellectual skill, (*c*) incomes received. By illustrations and charts the author shows that (1) in both industries mechancial methods have been introduced to an almost amazing extent; (2) that they call for fewer workers; (3) that where modern machinery has been put in the work has proved safer to the employees; (4) that to a great extent unskilled labor has been displaced, and that a call for higher types of workers has been made.

UPHAM, ELIZABETH G. *Desirability of vocational education and direction for disabled soldiers. Madison, University of Wisconsin, 1917. 20 pp. University Extension Division, General Information and Welfare, Vocational Series No. 2.*

USBORNE, H. M., ed. *Women's work in war time: A handbook of employments. London, T. Werner Laurie, 1917. 174 pp.*

Part I consists of a guide to employment, with information as to requirements, wages, where to apply, etc. In Part II several of the vocations open to women are described in detail, various writers contributing. The book carries a preface by Lord Northcliffe.

WALLIN, J. E. WALLACE. *Problems of subnormality. Yonkers (N. Y.), Word Book Co., 1917. 485 pp. Bibliography.*

A plan for the organization of various types of special and ungraded classes to meet the needs of different types of exceptional children, which has been subjected to a practical test in the public schools of St. Louis.

WEBB, BEATRICE, M. D. *Health of Working girls: A handbook for welfare supervisors and others. London, Blackie, 1917. 103 pp.*

"An attempt to do some little toward meeting the new conditions arising from the war, which have not only brought many hundreds of thousands of women and girls into factories, in addition to all who were there before, but which have led to the coming of the welfare supervisor with her great opportunities for help. The work is based on long and varied experience in dealing with girls of all classes, in hospital, in private practice, and in detailed investigations into the health of munition workers, carried out for the Health of Munition Workers Committee of the Ministry of Munitions."

This little book deals with the various disorders to which the body is liable, and with methods of prevention and cure, so simply and well that it is perhaps not too much to say that it should be in the hands not alone of every welfare supervisor but of every working girl.

WHITE, WILLIAM CHARLES, and HEATH, LOUIS JAY. *A new basis for social progress. Boston and New York, Houghton Mifflin, 1917. 229 pp. Bibliography.*

Advocates "municipal foundations for the study and advancement of community education," to apply the fundamental principles of economy to the educational system.

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A MODERN INDUSTRIAL SUBURB.

BY LEIFUR MAGNUSSON.

Morgan Park, a new suburb of the city of Duluth, Minn., is an iron and steel town owned and operated by a subsidiary company of the United States Steel Corporation. While it was established in connection with an iron and steel manufacturing center, its problems are those of a residence section for any industry compelled to locate outside the limits of a large city in order to secure an adequate amount of space and a continuous supply of labor. During the period extending from the time when plans for the establishment of the steel plant at that point were first drawn up, to the time when active operations began, temporary housing for the construction forces was necessary. The development thus presents one method at least of housing a temporary labor force, and may therefore be instructive to all industries of a temporary nature. The methods employed are of interest to shipyards whose work may be temporary and to companies engaged in the erection of power plants, construction of drainage areas, and irrigation and flood works, whose work terminates within a period of 5 to 15 years.

Morgan Park is an example of a modern industrial suburb intended to serve as a nucleus of a permanent industry. It has been developed in an orderly and systematic manner, town-planning principles have been observed in its layout, educational and recreational facilities have been provided, and houses of a permanent and substantial character erected.

Architecturally it is of interest in that one type of material (concrete in two forms, block and stucco) has been used in the construction of the houses, yet variety has been secured and the usual monotony of company towns avoided. There is more than the average range in the number of rooms and character of dwellings provided in the different designs in order that both high and low paid labor may be accommodated. In this one community may be studied

the temporary labor camp, the multiple and row house for the lower paid class of labor, the boarding house for the single men and women, the five and six room detached house for the better-paid workmen and the administrative force, and the eight and nine room house for the managers. In short, the houses are designed to reach all types of workmen and salaried employees.

History and purpose.—The first work for the erection of the steel plant which became the center of the community was begun in 1907. No work was begun on the town site till August, 1913. The land at that time was overgrown with brush, but by August, 1915, the first group of houses was complete.

All this early development—the town planning, street work, house construction—was carried on as a part of the general construction work of the Minnesota Steel Co., but in 1915 a separate company—the Morgan Park Co.—was organized to take over the housing work, its maintenance, general operation, and extension.

The industrial suburb in question was established to house a certain nucleus of the future labor force of the Minnesota Steel Co. It also exists to house certain employees of other subsidiary companies of the United States Steel Corporation operating in that neighborhood, namely, the Universal Portland Cement Co. and the Duluth, Missabe & Northern Railroad Co. The steel plant employs over 3,000 men at present, but only about 400 families are housed in the company town. Employees of other subsidiaries bring the number housed in the suburb to about 440 families at present, in addition to which about 180 unmarried employees are accommodated in the company boarding houses and about 130 are living as roomers and boarders in private families, making a total of about 750 employees out of about 3,500 employed by the steel plant, the cement plant, and the housing company.

Among the principal results secured by the company in developing the suburb as a company town has been the keeping down of private rents in speculatively developed suburbs surrounding it. The housing company is convinced that it has prevented excessive exploitation of the steel company's employees which, if it had been allowed, would have seriously hampered the company in securing an adequate and sufficient supply of labor. Buying land merely for its plant, erecting that plant, and leaving the housing of its working force to exploitation of private landholders, would have proved a shortsighted industrial policy.

Land values.—Naturally there have been large increases in the value of the land bought by the steel corporation and of that in the vicinity held by private interests, due to an increased demand for

locations near the steel and Portland cement plants. The steel corporation, moreover, has put vast sums into improvements which have added to the value of the property.

The land was originally raw land, having only an agricultural value. In 1906 the assessed value of 1,250 acres within the area purchased by the steel corporation was $29,500, or $23.60 per acre, according to the records of the office of the tax assessor of the city of Duluth, Minn. As land is assessed by the city at 40 per cent of its "full and true" value, the value per acre at that time was probably about $59. Of the approximate 190 acres in the town site of Morgan Park, the 141 acres which had been improved by the end of 1916 have been assessed at $720 per acre, and the additional 48 acres improved in 1917 have been assessed at $1,000 per acre. This would make the average assessed value of the actual 189 acres for which the figures apply about $791 per acre, or a "full and true" value of $1,975 per acre at the present time.

Location and accessibility.—Morgan Park is within the city limits of Duluth, which in 1916 had a population of about 92,000,[1] and is connected with the city by a street car line and a railroad line. The fare by street car is 5 cents from the center of Duluth, a distance of 10 miles and about an hour's ride.

The village is located on a low plateau overlooking Spirit Lake, an arm of the St. Louis River. The plateau is cut by a few small ravines. The town site occupies an area of about 190 acres, out of a total of 1,600 acres purchased by the United States Steel Corporation for the plant of the Minnesota Steel Co.

Arrangement of town site.[2]—Town planning, particularly street layout, has been much simplified by the level character of the ground. Few curved streets have been made for their own sake, but principally as a result of the natural profile of the lake shore and the ravines. A broad avenue running north and south, 80 feet wide from lot line to lot line, and with a central parking, traverses the center of the village (Fig. 1). The street car line passes through the central park strip.

Two radial avenues, 70 feet wide, extend from the community center adjoining the school, near the center of the town. All secondary streets are 50 feet wide, lot line to lot line, and alleys are 16

[1] U. S. Department of Commerce. Bureau of the Census. Financial statistics of cities having a population of over 30,000, 1916. Washington, 1917, p. 15.

[2] The careful town planning observed in the laying out of this industrial suburb is in striking contrast to the planning of the city of which it is a part, for while Duluth is laid out on the side of a series of hills and bluffs overlooking St. Louis Bay and Lake Superior, nevertheless the streets have been run straight with the surveyor's line at right angles to a main street which has been laid in disregard of the lake and harbor line. Grades of 12 per cent and over are not uncommon. Only the accident of a few original country roads up between the hills has preserved a few lines of communication following easy grades. The whole problem of replanning a growing and congested city is now under discussion.

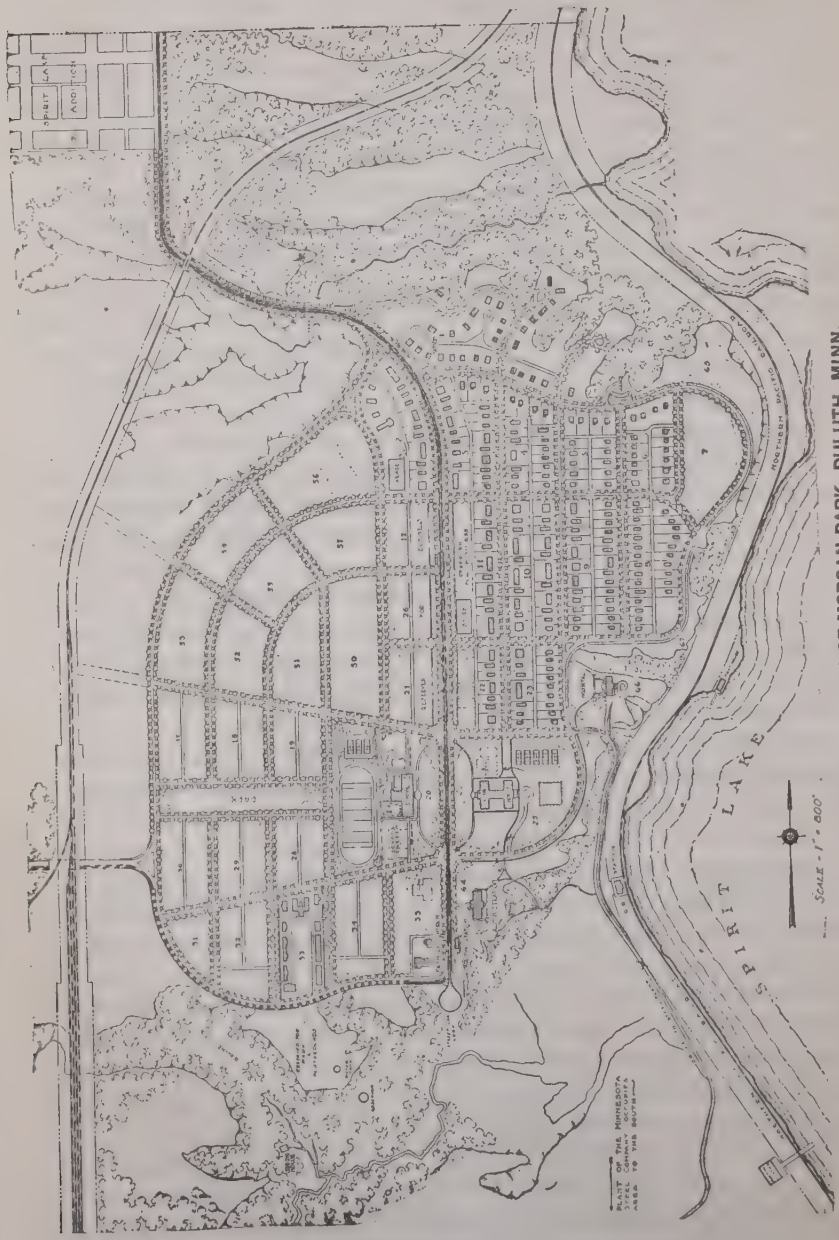


FIG. 1.—GENERAL PLAN OF MORGAN PARK, DULUTH, MINN.

Spirit Lake Addition shown in upper right corner is a private real estate development.

feet. All alleys have open ends, except in the low-rental block, and may be inspected from the streets. All streets and alleys are paved with concrete and have been properly pitched to secure easy drainage.

In planning the town site the positions of trees were noted and an effort made to retain as many as possible. Parking was established along all principal and secondary streets. The tree planting has been thought out as a whole, certain harmonious types of trees being grouped in different streets, with evergreens, shrubs, and bush roses at other points, and vines planted for each house.

Districting.—As no land or houses have been sold, the title to the whole town site remaining in the company, present and future difficulties in securing an advantageous districting of the town site to observe the proper amenities have been simplified. There have been set aside special blocks in the town site for business purposes; community playgrounds and parks have been provided adjacent thereto, and an entire block of 10 acres has been donated to the city of Duluth for a school site. Residences of the single, semidetached, and terrace, or row types of the better class, have been restricted to the eastern half of the community nearest the lake shore, while in the western half of the town are located the first units of houses in small house blocks, for the lower-paid and unskilled labor. No race segregation is attempted.

The building restrictions imposed provide a setback of 20 feet for all houses and prohibit the erection of any outbuildings on the lots. The north side of each building is placed close to the lot line on account of the shade cast by the houses which would prevent the growing of flowers and shrubbery.

Public utilities and facilities.—The water system is dual: one for drinking and washing purposes, from a tank fed with spring water, and the other fed from the lake, the water of which is used only for sanitary fixtures, lawn sprinkling, and fire purposes. A dual system of storm and sanitary sewers has been installed, and the local public utility company furnishes electric current with which all houses are provided. Mains and house connections for fuel gas have been provided throughout in anticipation of the extension to Morgan Park of the city gas mains which will probably take place in 1918. All streets and alleys have been paved with concrete at the expense of the company. The Morgan Park Co., moreover, provides the necessary fire protection and attends to the daily collection of garbage and rubbish, street cleaning, snow removal, fuel distribution, and policing.

As stated, sewage is carried in a separate system and discharged into the lake, in like manner as in all other parts of the city, though the system has been so laid out that a sewage-treating plant can be

installed at any time. Storm water is drained to the ravines and lake through a separate system.

All gas, water, and sewer lines are laid in the alleys. On account of the severe climate, water and sewer lines are laid seven feet deep. A fire hydrant is located at the curb in the center of each block, the longest block being 750 feet. Fire hydrants are also located at street and alley intersections.

All wiring is underground, and hence no poles are used save those necessary to carry the street lights and trolley wires. The electric lines for street lighting are laid in the grass strip between the curb and sidewalk. The electric and telephone conduits which serve the houses have been laid longitudinally through the lines of houses.

There is a large community garage, for the use of which a low monthly charge per car is made. This garage accommodates 42 cars, is steam heated, fireproof, and fully equipped with supply and repair shop. Other smaller community garages of 10 stalls each are provided for the more distant residence sections. The community has a provision store operated by the Morgan Park Co., and a number of independent stores and offices in the same building.

Educational, recreational, and health facilities.—The city of Duluth has erected a schoolhouse and an extensive playground on land donated by the Morgan Park Co. The Gary or Wirt system of education is applied in this school, which is equipped with auditorium, gymnasium, library, workshops, and laboratories.

Land has also been set aside by the Morgan Park Co. for two churches, one representing the Catholic faith, the other the Protestant. The Catholic Church is in course of erection and the Protestants in the community have agreed to form a single church body, and are organized as the United Protestant Church of Morgan Park.

An area of approximately 8 acres has been set aside for a clubhouse and recreation grounds. The clubhouse and its recreation grounds, completely equipped, are provided by the Morgan Park Co. and leased free of rent by the company to the Morgan Park Club, an incorporated organization composed of the employees. The constitution and by-laws for the conduct of the clubhouse were drawn up by the employees and approved by the company prior to leasing the property to the club.

The clubhouse has outside dimensions of 156⅓ feet by 220 feet; and is in the form of four distinct wings and a central portion; it is one story and basement high. It is built of cement stucco, the curtain walls and roof being supported by heavy concrete buttresses; it conforms to the general architecture of the community. The clubhouse and its equipment cost approximately $127,000; the construc-

FIG. 2.—MAIN AVENUE.

Note central parking with street car track; also variety in view secured by alternating different types of houses, differing porches and roof lines.

FIG. 3.—FIVE-ROOM ONE-FAMILY HOUSE FOR STAFF EMPLOYEES AND SKILLED LABORERS.

Lot 50 feet front; cost, exclusive of lot, $3,367; rent, $20 per month. Furnace heated; all modern improvements.

FIG. 4.—GENERAL VIEW OF THE TERRACE OR ROW HOUSES OF THE UNSKILLED LABORERS.

Known as Block 33 in the town site.

FIG. 5.—VIEW OF LOW-RENTAL ROW OR TERRACE HOUSES, WITH NEIGHBORHOOD CLUB BUILDING IN THE FOREGROUND.

FIG. 6.—FRONT VIEW OF LOW-RENTAL ROW HOUSE ACCOMMODATING EIGHT FAMILIES.

Dwellings in central gable have 6 rooms each; others, 4 rooms each.

FIG. 7.—REAR VIEW OF LOW-RENTAL ROW OR TERRACE HOUSE.

Note coal bins (half-ton capacity) provided for each dwelling; also raised roof dormers where bathrooms are placed. (See plans in Fig. 17.)

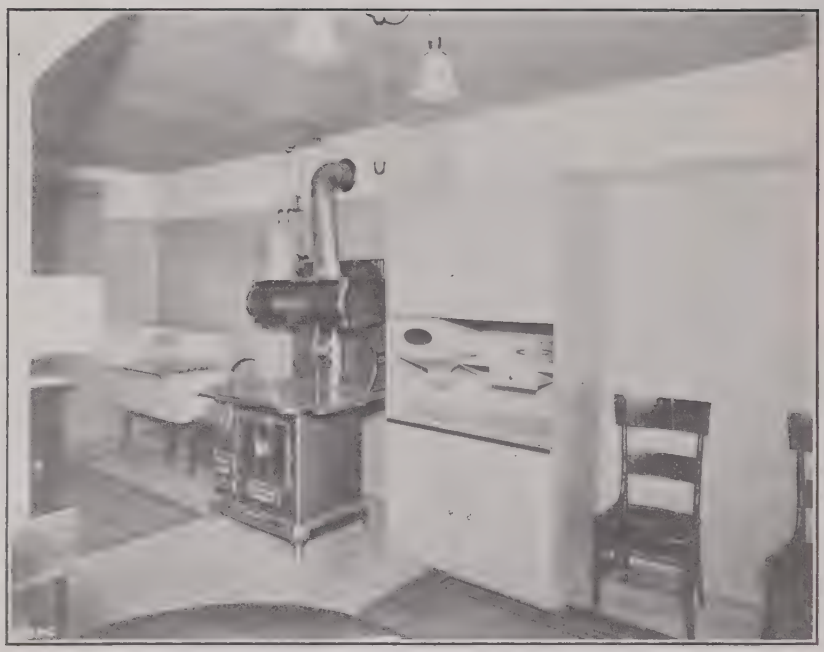


FIG. 8.—INTERIOR VIEW OF KITCHEN AND EQUIPMENT OF LOW-RENTAL HOUSES.

Note combination sink and laundry tubs.

FIG. 9.—INTERIOR VIEW OF THE BUNK HOUSE. STEEL FRAME BUNKS.

tion and equipment of the recreation grounds cost $26,000. The clubhouse is equipped with a gymnasium and swimming pool, an auditorium with stage, smaller lecture rooms and class rooms, a men's club section comprising a reading and reception room, a women's club section comprising reception and reading rooms and kitchen, and a juniors' club section for boys and girls. As may be inferred from this description, it is adapted equally well for Y. M. C. A. activities and for general club purposes.

In connection with the low-rental houses a separate club building or neighborhood house, costing about $18,500, with headquarters for the social service director, has been provided. At the present time the school building is being used as a community center where, in the evening, motion pictures are exhibited, basket ball played, and gymnasium classes, educational classes, dances, and social gatherings are held.

Opportunities for outdoor sport are afforded on the school and clubhouse grounds already mentioned. Also, a baseball and football ground, tennis courts, and a skating rink are provided elsewhere in the park. There are also possibilities for boating, bathing, and camping at the Morgan Park Boat Club. The summer camp equipment cost about $6,000.

A modern hospital with the latest equipment has been provided at an expense of about $70,000. The hospital is equipped to accommodate 32 patients. One of its principal features is the provision of two large screened-in porches used as solariums. It is so placed as to command attractive views of the St. Louis River and is surrounded by extensive grounds.

Two public comfort stations and waiting rooms costing about $5,500 have been provided adjacent to the car line, and waiting stations are included in the designs for buildings about to be constructed at street corners of the main thoroughfare.

Park benches and public drinking fountains have been located at several of the street intersections.

LABOR CAMP.

For carrying on the earlier construction work of the steel plant and of developing the town site, temporary bunk houses, including mess quarters, were constructed by the contractors. These were rough structures with tar paper exteriors. During the season of 1917 a modern sanitary camp was constructed by the Morgan Park Co., to house additional extra labor in the plant and for construction work on the town site, the older camps being dismantled as being insanitary and inadequate. The layout of the camp buildings is shown in Fig. 10.

All the new camp buildings are of frame construction, set on piers sunk to solid ground, the lower parts being screened for 18 inches

below ground by wire mesh to keep out rats and other burrowing animals. Inside walls are 8 feet 2 inches high. The exterior is of tar paper on the studs, covered with 4-inch drop siding and painted. The interior wall is of tar paper on studs ceiled with 4-inch material, and varnished. The floors are double with tar paper between, and the roof of composition paper. Modern plumbing is installed. The camp is heated by stoves and is lighted by electricity. Figs. 11 and 12 show the details of the arrangement of the camp and Fig. 9 shows a view of the interior of the bunk house.

Included as a part of this construction camp is an employment office for the contractors, in which is located the medical examination room used in examination of men who seek employment. There is also a separate boarding camp suitably arranged for women. No women, however, have so far been employed at the camp. Among the special features of the camp should be noted the club building equipped with a small store, reading matter, and music, and the separate bath and wash houses, one in connection with the foreman's bunk house and the other for the labor force. There is also a laundry house where the men may wash their working clothes.

The kitchen is equipped with a separate bakeshop with a capacity of 220 loaves. All the bread, pastry, and cake used in the camps is made here. There is also a root cellar below the kitchen floor and a large ice box and meat-cutting room well screened.

All washing fixtures are of the "flowing stream" type, to avoid the danger of transmission of disease by common use of washbowls. Sanitary drinking fountains are provided throughout. Shower baths are provided in the central washhouse and a supply of hot water maintained. All windows and doors are screened.

The whole camp accommodates about 400 employees and provides quarters for 10 women. It cost approximately $31,500, including the sewers, water lines, roads, and lights.

The camp is operated by a lessee—a company which manages several railroad and logging camps in the vicinity. This lessee provides all the bedding, kitchen and dining-room utensils, and pays the cost of all renewals of every kind except construction repairs. The Morgan Park Co. supplies the lessee, free of charge, with a reasonable amount of ice and fuel and maintains the walks and roads and the recreation facilities. The lessee is not charged with any rental.

In return for the concession the lessee agrees that until further notice the rates charged for room and board shall not exceed $6.25 per week; that he shall maintain the buildings, grounds, and equipment in good condition; and that the sanitary and fire inspectors shall have authority to require the lessee to conform to the standards required by the company. The lessee is required to execute and file

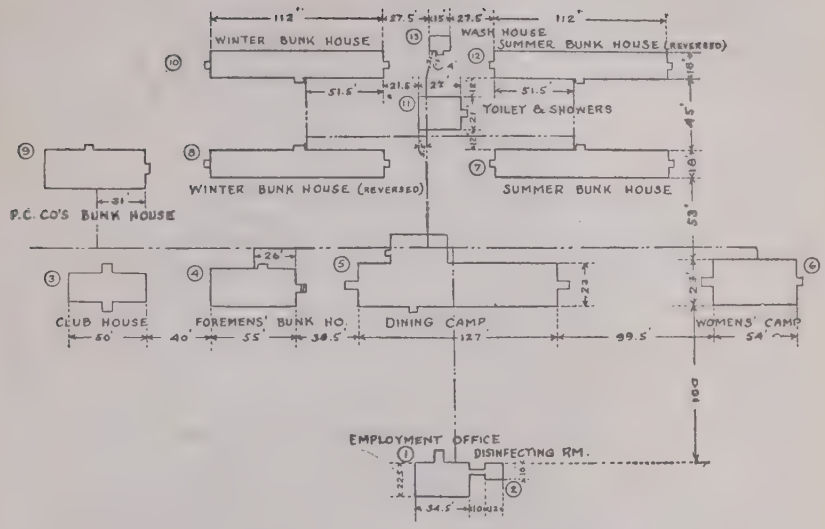


FIG. 10.—LAYOUT OF CAMP BUILDINGS.

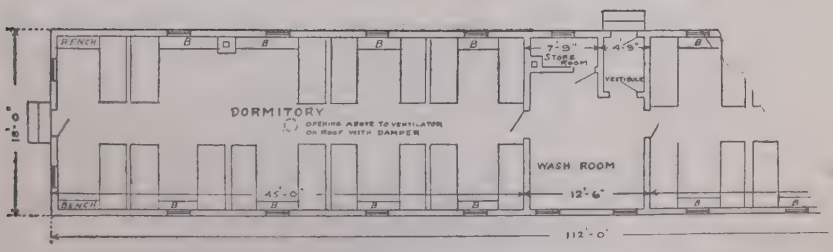


FIG. 11.—FLOOR PLANS OF THE BUNK HOUSE, SHOWING ARRANGEMENT OF BUNKS AND BENCHES.

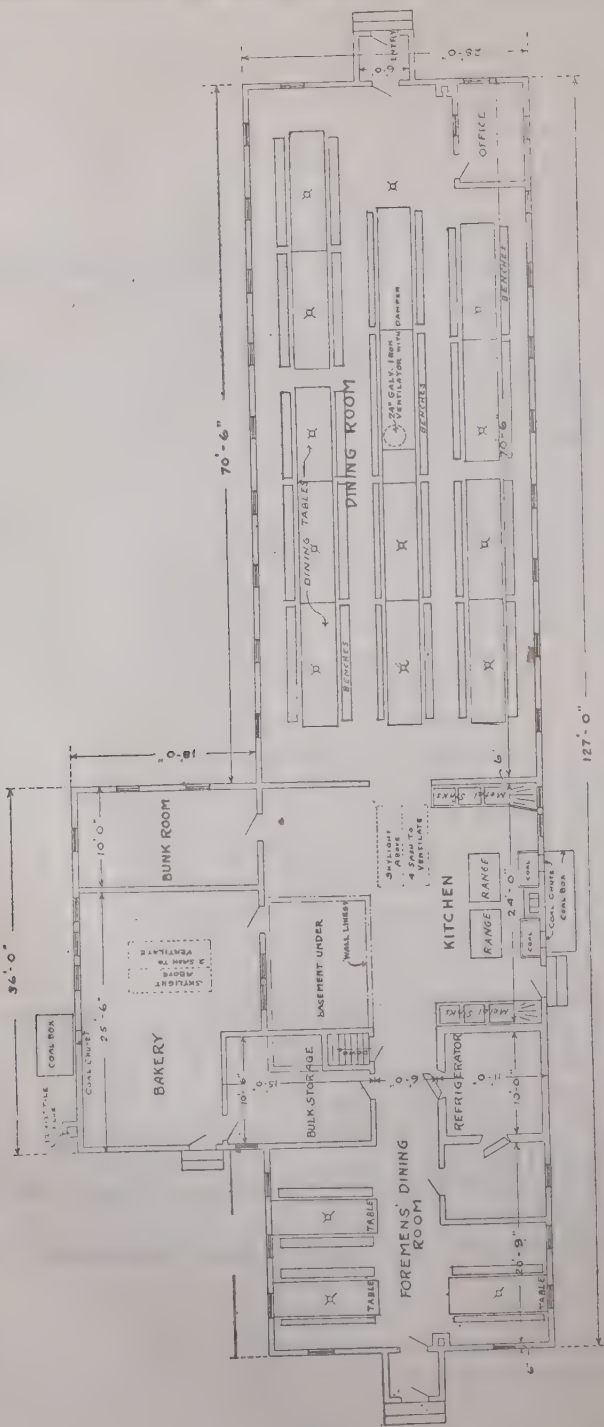


FIG. 12.—FLOOR PLAN OF THE BOARDING CAMP.

with the company a liability bond to cover the value of company equipment and to account to the company at the termination of the lease for all such property, and to make periodical inventories to the company of the articles supplied by the company.

The lessee is responsible for collection of his own bills, and agrees not to retain in his employ any camp employee who is troublesome, diseased, or objectionable, and to eject any boarder of like character. He may not engage employees other than those specified by the Morgan Park Co., nor house colored persons. Gambling and the use of intoxicants on the premises are prohibited.

HOUSES OF THE COMMUNITY.

All permanent houses and buildings in the community are of concrete material and practically fireproof, except as regards the roofs of the earlier-built houses, which are of cedar shingles. The exterior walls of the better houses are constructed of T-shaped machine-molded concrete blocks and of hand-molded concrete bricks in the later houses. The floors are of hardwood, laid over reinforced concrete. The inside walls are plastered and tinted. In the low-rental houses the walls are of stucco on metal lath, and the interior plastered and covered with a special washable fabric which prevents cracking of the plaster; the floors are of cement.

The houses of the better-paid skilled workmen and of the office staff and officials are characterized by variety in architecture and arrangement, by spacious lots with lawns, and by the provision of all modern sanitary equipment. There are altogether 36 types of buildings. There are provided 437 dwellings altogether, of which number 125, or 28.6 per cent, are single detached dwellings, and 312, or 71.4 per cent, are either detached flats, double flats, or rows, as is shown in the table following. All of the better-class houses have bathrooms, hot and cold water connections, and laundry tubs, and are heated by hot-air furnaces. The houses are furnished with electric-light fixtures, gas connections for cooking, kitchens with sanitary plumbing, and some have fireplaces. With the exception of fireplaces, and furnaces in most instances, some of the low-rental houses are similarly equipped.

DISTRIBUTION OF HOUSES ACCORDING TO TYPE AND NUMBER OF ROOMS.

Type of house.	Number of dwellings having—						Total.	Per cent.
	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms.	9 rooms.		
Single, detached	.....	39	54	6	17	9	125	28.6
Flat, detached	40	70	.....	.....	.....	.....	110	25.2
Flat, double, detached	20	20	.....	.....	.....	.....	40	9.1
Row or terrace	146	2	14	.....	.....	.....	162	37.1
Total	206	131	68	6	17	9	437	100.0
Per cent	47.1	30.0	15.5	1.4	4.0	2.0	100.0	.....

Better-type Houses.

The houses of the skilled workmen, office staff and superintendents are modern improved houses not differing essentially from what such employees would ordinarily provide for themselves as within their means.

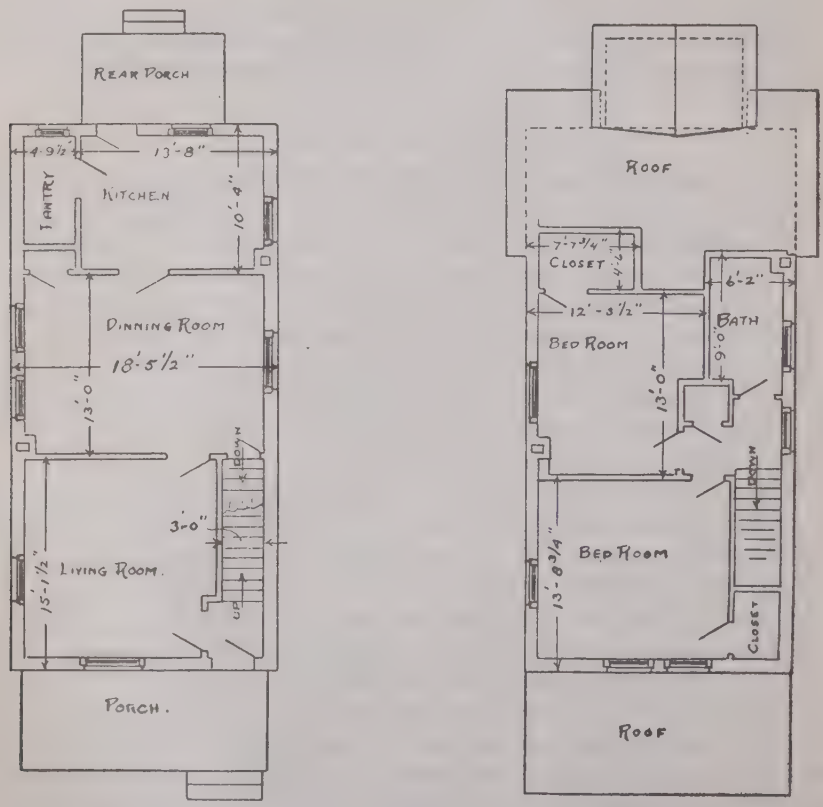


FIG. 13.—FLOOR PLANS OF BETTER CLASS ONE-FAMILY HOUSE SHOWN IN FIG. 3.

Cost and rentals.—All 4-room houses in the eastern section of the town site rent at the rate of $3.75 per room per month, or $15 for the house. All other houses in the original development of the eastern section rent at the rate of $4 per room per month. The newer houses constructed in 1916 and 1917 rent at a slightly higher rate as shown in the tabulation on the next page.

COST AND RENTALS OF BETTER CLASS OF HOUSES.

Type of house.	Number of dwellings erected.	Cost per dwelling.[1]	Rooms per dwelling.	Cost per room.	Rent per month.
Houses constructed in 1914 and 1915.					
Single, detached	30	$3,353	5	$671	$20
	39	3,702	6	617	24
	10	5,592	8	699	32
Flat, detached	40	2,741	4	685	15
	70	2,850	5	570	20
Flat, double, detached	20	2,544	4	[2] 565	15
	20	2,544	5	[2] 565	20
Row, 4 dwellings to the row	60	2,144	4	536	15
Row, 6 dwellings to the row	60	2,008	4	502	15
Total	349	2,753	4.7	588	18
Houses constructed in 1916 and 1917.[3]					
Single, detached	7	5,750	5	1,150	28
	2	5,750	5	1,150	35
	4	6,450	6	1,075	35
	3	6,050	6	1,008	32
	4	6,050	6	1,008	35
	4	6,750	6	1,125	40
	4	7,750	7	1,107	40
	2	8,550	7	1,221	45
	7	8,390	8	1,049	50
	9	8,417	9	935	50
Total	46	7,163	6.8	1,049	40

[1] Not including cost of land and outside improvements.
[2] Average for 4-room and 5-room flats.
[3] The houses built in 1916 and 1917 have fireproof roofs of cement tile, terra-cotta tile, asbestos, and metal shingles; concrete coal bins and vegetable cellars; inclosed rear porches, sun porches, and several other improvements involving considerable additional expense, and were constructed at a time when labor and materials were very high.

Construction and accommodations.—The walls of the 349 original houses are constructed of T-shaped concrete bricks, machine molded. The walls rest on concrete footings 5½ or 6 feet below the grade line. Below the grade line the wall is laid of two rows of blocks, staggered and reversed. Above the grade level only one row of blocks is used, and on the inside legs of the blocks one thickness of plaster board is nailed on a furring strip and covered with fiber plaster. There is thus made in the wall an air space.

The cellar floors are of concrete, as are also all the other floors. The upper floors are of reinforced concrete laid between the 2 by 6 inch joists. The concrete is poured from above between these joists, and surfaced so as to expose the joists and permit of nailing to it the wood flooring above and the ceiling boards below.

Experience has shown that machine-molded concrete blocks, if made too dry, are liable to be too porous and may cause dampness if exposed to violent and long-continued driving rains such as are characteristic of this locality. In this type of construction, and if excessive porosity occurs, the vertical air spaces within the walls may permit moisture to trickle down inside the wall till it reaches the concrete floor where it is arrested and caused to travel horizontally below the wood floor covering till it reaches an outlet in the concrete

floor and thus affects the ceilings of the rooms below. In the houses built in 1917 a hand-molded cement block of solid form 4½ by 3 by 24 inches has been used instead of the machine-molded block. This type of block is used as a veneer on wood studding with plaster board and waterproof paper between and is superior in appearance, cost, and in insulating and waterproof qualities to the blocks used earlier.

In the row houses and flats, where three or more families are accommodated, inspection shows that noises from the adjoining apartments penetrate slightly through the party walls and floors. It is possible to hear voices, though not to distinguish words uttered in the adjoining apartment. It should be noted in this connection that the absence of street noises and wagon traffic render this com-

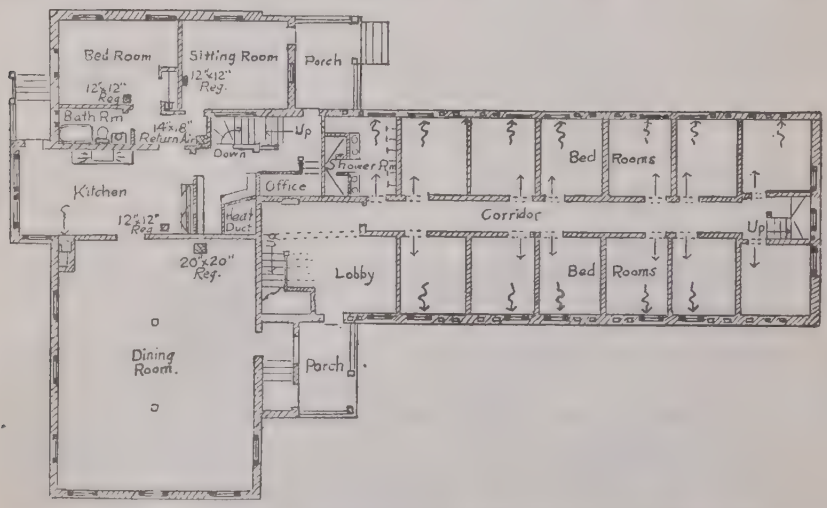


FIG. 14.—FIRST-FLOOR PLAN OF BOARDING HOUSE FOR STAFF EMPLOYEES.

Note separate entrances, one for caretaker's family, the other for the boarders, leading to a lobby.

munity unusually quiet and that noises not noticeable in cities are very noticeable in quiet residence sections. Nevertheless the manager of the housing company considers that the very fact of this quietness in such communities renders it desirable that experiments be carried on to make more soundproof the floors and walls of multiple houses of both the flat and terrace type, particularly for the reason that men working on night shifts and sleeping in the daytime are likely to be disturbed.

Boarding house for office staff.—Four boarding houses for the clerical force and technical men have been erected. They accommodate 74 men. The smallest room in any of these houses is 8 by 10 feet. Special furniture has been constructed for the rooms so as to secure the greatest economy of space. Plans of the first floor of the

largest one are shown in Fig. 14. The clubhouse dining room is also operated as a public dining room with à la carte and table d'hôte service, to avoid duplication of eating and hotel facilities in the park.

Houses of Low Rental.

For families of the lower-paid or unskilled laborers, multiple houses of the row type are provided, and for single men, boarding houses have been constructed. It should be noted that the row houses are not the ordinary continuous rows, extending unbroken for a whole block, as found in larger cities. They are short rows or groups, accommodating from four to ten families; each building is therefore a symmetrical architectural unit, and gives none of the monotony of the ordinary row of houses.

These houses, occupied largely by unskilled laborers, are located in a separate block (block 33) in the western half of the town site. Some features of the planning of the block (Fig. 15) are of interest as showing the thought given by the manager of the company to the housing of the lower-paid unskilled laborer.

(1) The alleys are located immediately in the rear of each line of houses, instead of in the center of the block. This reduces the amount of pavement necessary and is of special advantage in winter because of the shorter lengths of walk to be kept free from snow. It also permits the rear gardens to be individually fenced in and to be kept apart from the house lot proper when not in use.

(2) The buildings are arranged on the north end of the block in such manner as to screen from the street the view of the alleys and rear gardens. On the south end a screen of evergreens or latticework fences is to be provided.

(3) The boarding houses are kept entirely separate from the dwelling houses by a transverse alley and fence.

(4) The neighborhood house is located on the south end of the block, away from the boarding house, and convenient to the playground and park immediately adjoining on the south.

(5) A separate garden plot is provided for each family.

(6) The part immediately adjoining the dwellings at the rear, and extending to the alley, is gravelled and not grassed, as it is believed that it will not be kept up and hence may prove unsightly. Furthermore, since gutters on the houses are eliminated—to avoid trouble with ice in them in the severe climate—it has been necessary to prepare the ground to withstand wear from water drip.

The block provides for 42 families, one-half of which it is estimated may accommodate an additional boarder, though this practice is not encouraged; and 116 employees are estimated for the boarding houses. This makes a total of 179 employees to be housed in the

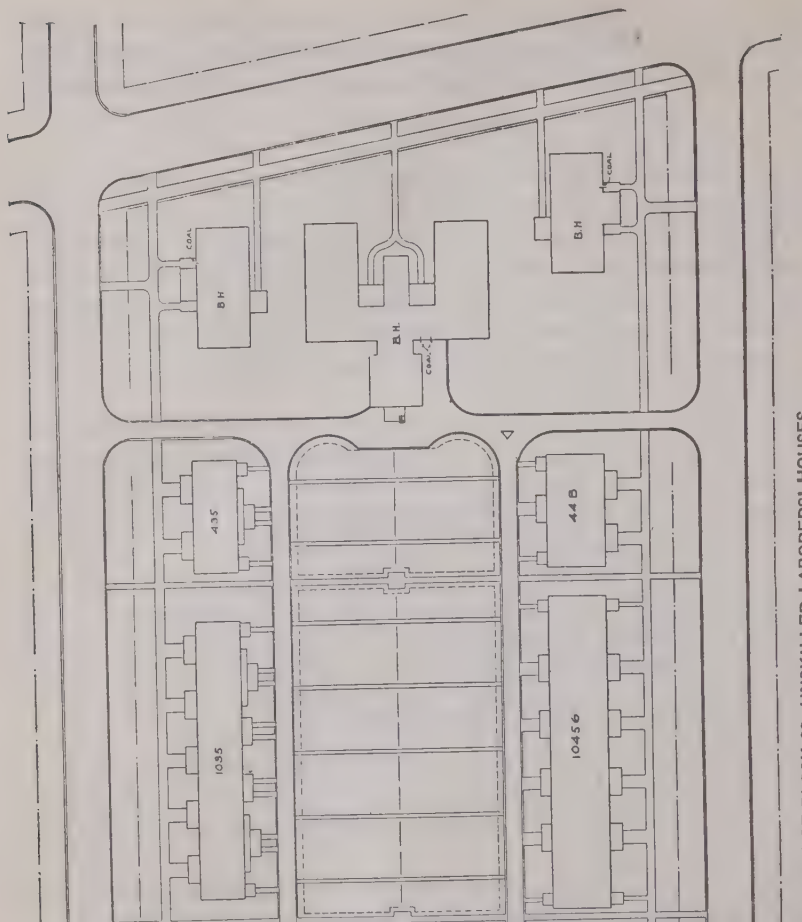


FIG. 15.—LAYOUT OF BLOCK 33, UNSKILLED LABORERS' HOUSES.

Note garden plots in center of block, double alleys, and obscuring of alley ends by placement of boarding houses and welfare building. The first figure, or figures, of the block number indicates the number of dwellings in the row; for example, 10456 is read as a 10-dwelling row containing 4, 5, and 6 room dwellings. B. H.=Boarding house.

block. The minimum population of the block will be about 280, the maximum probably 350.

Construction and accommodations.—The frames of the houses are of wood and the roofs of frame overlaid with roofing boards, waterproof paper, ventilating strips, and wood shingles. The floors are of reinforced concrete colored with pigment. The exteriors are of cement plaster, or stucco, on galvanized-wire lath, backed up with waterproof paper and plaster boards laid on the studs. The inside walls are plastered and covered with a special strong and durable washable fabric. The first floors are raised above the ground enough to secure an air space to insure dryness and to avoid frost trouble.

Sound transmission through party walls and floors has been considerably reduced as the result of experience with the earlier houses. The manager of the housing company states that still further improvements are possible and have been worked out for use in subsequent construction.

Certain special features of these houses should be noted. The bedrooms are large and have but one door in each, thus making provision for good housing standards should any of the families keep boarders.

The kitchen is large, so that it may be used also as a dining room. The living room in some cases is separated from the kitchen by a partition and door; in others the two practically form one large room occupying the entire first floor. This latter is a feature strongly recommended by the manager of the company. The majority of the houses are stove heated, as the manager feels that the type of labor to be housed may prefer stoves to the more elaborate or complicated furnace heating; also that the provision of both arrangements in otherwise similar types of houses in the same block is a valuable experiment.

The placing of coal bins on the rear porches of those houses which have no basements makes it possible to store a fuel supply on the premises without overcrowding the kitchen or necessitating coal sheds on the rear of the lots. These boxes contain approximately a half ton of coal. This feature is of particular importance because only eight of the houses in this low rental section have basements. A latticework on the porches at the rear is contemplated to avoid the usual objectionable appearance of such porches, resulting from their general use as storage places for ice boxes, washing machines, dish pans, and other kitchen appliances.

The houses are constructed with particular regard to winter conditions. Storm doors are provided, but these are so constructed that the upper panel can be removed in the summer and fly screens substituted. Metallic weather stripping is provided for all doors and

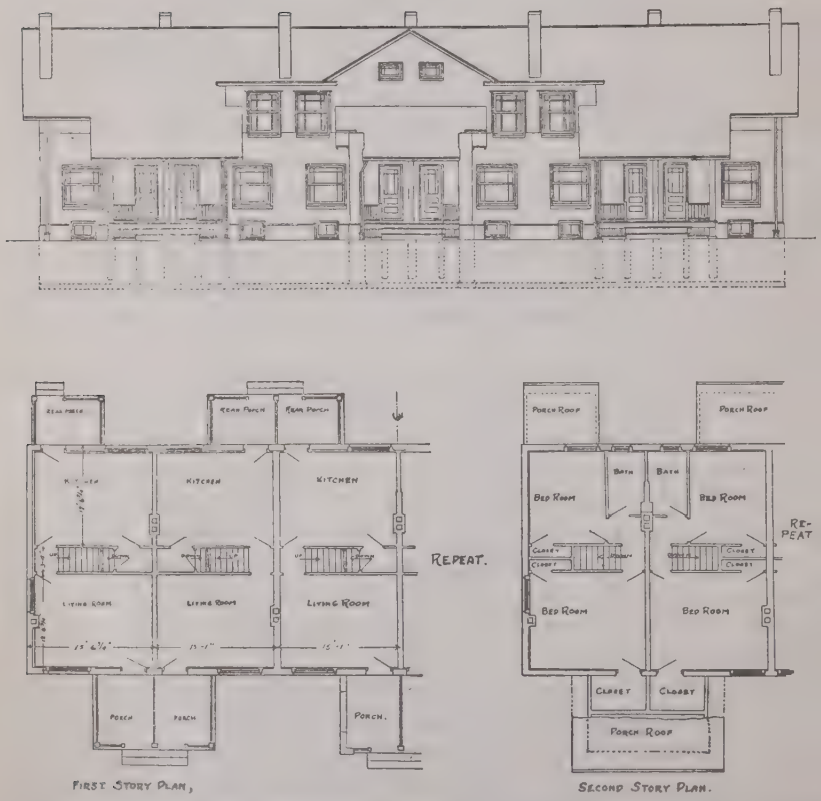


FIG. 16.—FLOOR PLANS AND FRONT ELEVATION OF 6 FAMILY ROW OR TERRACE HOUSE.

Lot, 120 feet front; 4 rooms for each family; basement; hot air furnace heat; all modern improvements. Cost per dwelling, exclusive of land, $2,008; rent, $15 per month.

windows and all windows have double glass in each "light" to avoid the use of storm windows and the necessity for providing storage space for them.

The housing company lays great stress upon the importance of so designing the kitchens that the walls may be used to the greatest extent possible for storage of food, utensils, and china, and thus conserve floor space for other purposes. This is considered especially necessary where the houses are compactly arranged to save building cost and permit of low rentals and where basements are dispensed with.

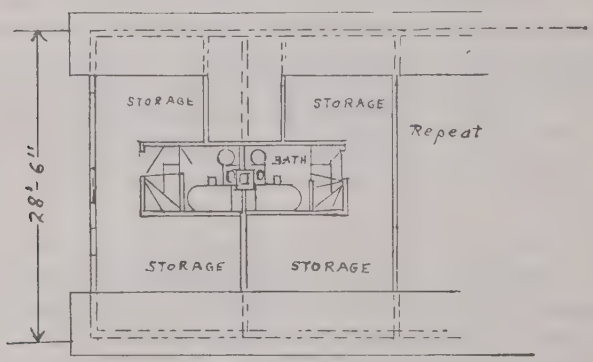
Costs and rentals.—There are 42 dwellings provided in the form of row houses, that is, buildings containing four or more dwellings side by side. Each dwelling is provided with a three-piece bathroom, kitchen sink, and laundry tub—combination laundry tub and sink in the kitchens of those houses without basements—and a hot-water tank connected with the stove (Fig 8). All houses are electrically lighted.

The cost of erecting these houses for the low-paid unskilled laborer averages about $400 per room, not including the bathroom as a separate room. The 42 dwellings were built under a single contract in 1916 and 1917.

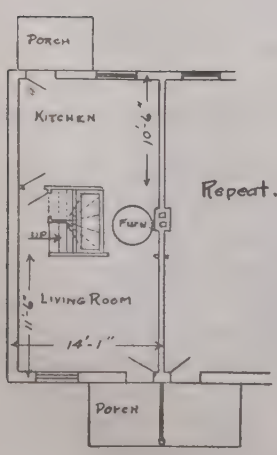
Of the 42 dwellings, 26 contain 4 rooms per dwelling, and of the 26, 12 are heated by stove, and rent for $10 a month; 12 are heated by furnace placed on the first floor, as shown on the plans (Fig. 17), and rent for $11 a month, while two having a basement and furnace rent for $12 a month. Fourteen of the 42 contain 6 rooms each. Eight of these 14, heated by stoves, rent for $15 a month; four, having furnace heat, rent for $16.50; and two, each of which has a basement and is heated by a furnace, rent for $18.75 per month. The two remaining dwellings, in the form of a double house, provide five rooms for each family unit, are heated by furnace, and rent for $13.75 per month per family.

Boarding houses for unskilled labor.—Three boarding houses for the single men have been erected in the low-rental block described above. Two of these are identical in plan, except that one is the reverse of the other. Each of the last named accommodates 16 boarders in 8 double rooms and 9 in single rooms, together with 7 rooms for the family or administrative staff engaged to operate the house. The larger boarding house accommodates 44 boarders in 22 double rooms, and 22 in single rooms. Sixteen rooms are provided for the caretaker of the house and for administrative purposes. Single rooms are 8 feet 3 inches by 10 feet 8 inches, and double rooms generally 11 feet 3 inches by 10 feet 8 inches.

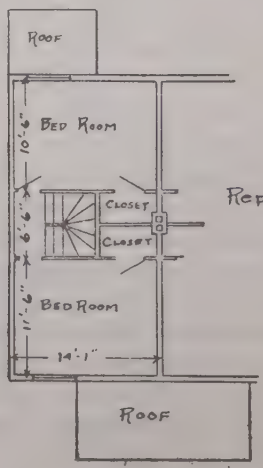
The construction of the boarding houses is the same as of the low-rental houses, i. e., cement stucco on wire lath, backed by waterproof paper and plaster board. All floors are of concrete, some of the floors



THIRD FLOOR PLAN.



FIRST FLOOR PLAN.



SECOND STORY PLAN.

FIG. 17.—PLANS AND ELEVATION OF LOW-RENTAL ROW HOUSE.

Note placing of furnace on first floor, house being without basement. Note also bathroom located on third floor.

being covered with a top flooring of maple; roofs are similar in construction to those of the dwelling houses; the interior finish is of painted pine; and walls are wood-fiber plaster on plaster board. Modern plumbing is installed throughout, and the houses are heated by hot-air furnaces, and lighted by electricity.

In the smaller boarding house the dining room, kitchen, living room, wash and toilet room, furnace room and a storage room are in the basement. There are also a toilet room and a living room for the management on the first floor, but none on the second floor.

In the larger boarding house the basement contains the furnace room, laundry, and storage room.

All boarding-house wash rooms have shower baths, washbowls with "flowing-stream" faucets, liquid-soap dispensers, sanitary drinking fountains, and toilets.

Each wing on each floor has independent toilet and washing facilities. Each wing, furthermore, is entirely isolated from the other by the central dining room on the first floor and the recreation room on the second floor; both of the latter are reached by an outside entrance, so arranged that every person entering the dining room or recreation room must pass the custodian's office. The kitchen and the servants' quarters are arranged in such a way as to secure complete isolation from the remainder of the building except through the dining room.. The custodian has an office, a bedroom, and a toilet in connection. The dining room will seat all of the boarders at one time. The recreation room, on the second floor, above the dining room, is of the same size as the latter.

Neighborhood house for low-rental employees.—The welfare building, or neighborhood house as it is called, is designed to be the center for neighborhood recreation. The building is of the same construction and appearance as others in the block. It contains a small store where special foreign goods and foods are sold, a barber shop, and a neighborhood nurse office. There is a lounging room for the men and a meeting room for the women completely separated and having ready access to the nurse's office. The second floor is principally one large recreation room, which may be used for entertainments, lectures, dances, etc., with equal facility, and a kitchen attached thereto for conducting cooking classes for the women and children of the section and for use in connection with entertainments. The basement is devoted principally to classrooms or reading rooms, in order to give the maximum degree of quietude.

Up to the present time the store and barber shop have not been used as such, principally because the population in that section is yet too small. These rooms are being used as adjuncts to the recreational features now being carried on.

The entire building was designed to permit of the greatest "elasticity" in its use; that is, any one or more of the rooms can be used for several purposes, thus allowing the use of the building to change from time to time as the personnel or requirements of the adjacent residents demands.

As an example of this arrangement: As one of the two churches is still in course of construction and the other building (the Union Church) is being planned, all religious services and Sunday-school instruction are now carried on in the neighborhood house without interference with one another or with the secular functions. Red Cross work is conducted here on weekdays, as are meetings of the community club (the local civic league) and dances in the auditorium, a children's playroom in the "barber shop," a boy's club in the "store," and Sunday school in the men's and women's reading rooms, while cooking classes are held in the kitchen adjoining the auditorium.

All wash rooms are equipped with shower baths and sanitary features similar to those described in the men's boarding houses.

POLICY AND MANAGEMENT.

The houses of the community are rented only to employees of subsidiary companies of the United States Steel Corporation in the neighborhood and persons doing professional and mercantile business in the Park. No houses are sold. As noted, all types of employees are reached, although only to a limited extent. The Minnesota Steel Co., for whose employees the community was primarily established, employs, in round numbers, about 3,000 persons; the Universal Portland Cement Co. some 450, and the Morgan Park Co. about 50; as yet, only about 750 employees altogether are accommodated in the company town, including the boarding houses.

The tenants for company houses are selected generally in the order of their application. Other considerations may, however, have weight in the matter, such as the character of the applicant's services, his general desirability as a tenant, and the likelihood of his becoming a permanent employee.

An information card is kept of each tenant, which shows the make-up of his family and information concerning his past rental record.

Rent is collected once a month. The subsidiary companies whose employees are housed generally collect it by a deduction from the pay of the employees, upon their written request, and turn it over to the housing company. Employees requesting it, certain of the administrative staff, and nonemployees pay rents at the office of the company as in common house-renting practice.

A rental lease is signed for such terms as may be agreed upon. It does not, as is common in many company leases, contain a provision

to the effect that the lease is for the term of employment only, but does provide that notice to vacate in 30 days may be given.

The management of the Morgan Park Co. is in the hands of a resident manager and an office staff of about six persons. There is

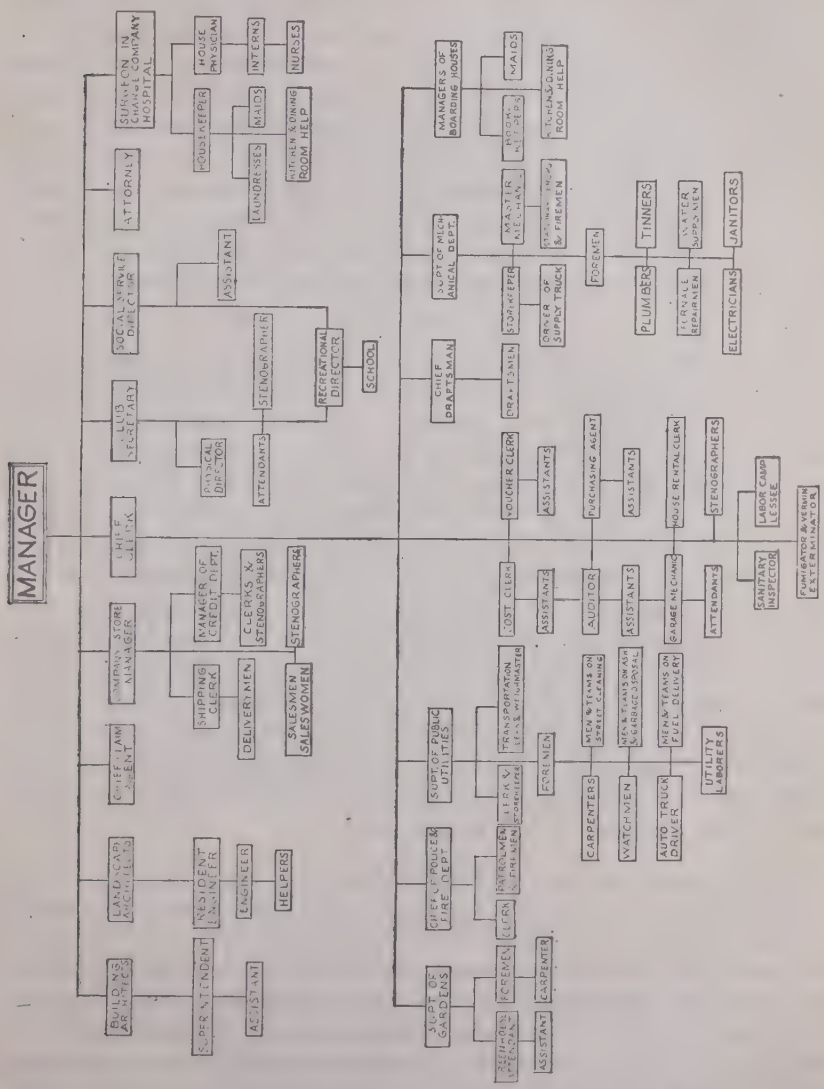


FIG. 18.—ORGANIZATION CHART OF THE MORGAN PARK CO.

also a maintenance force to attend to the work of landscape gardening, fuel distribution, street cleaning, water service, fire department, watchmen or police force, repair, garbage removal, sanitation, and general labor force. The organization chart (Fig. 18) shows the various activities carried on by the Morgan Park Co. The chart does

not aim to show so much the lines of authority as lines of communication in carrying on the varied community work. The chief clerk, it may be stated, is the office manager next in authority to the company manager.

The residents of the suburb are kept interested in their community by being informed, through circular letters, pamphlets, and a weekly bulletin, as to different phases of management—how to garden, how to take care of their furnaces, how to manage their water supply—keeping their lawns trimmed and premises neat, community recreation and entertainments, together with announcements of all social, religious, and educational events. Articles are contributed to the weekly bulletin by physicians, school-teachers, neighborhood nurse, agricultural experts, physical and recreation directors of the clubs, and officials of the local athletic and social organizations.

MAINTENANCE.

As housing is the sole business and interest of the company controlling the community, problems of house and community maintenance receive careful consideration. Reference has already been made to the daily collection of garbage and rubbish, provision of neatly paved alleys, lawns, and parked streets. Tenants keep their own lawns mowed, and by a system of prizes are encouraged to keep gardens. It has been found, however, that the present lack of rear-yard fences has militated against the greatest possible amount of gardening. Plans are now under consideration for the provision of neat fences in order to secure more gardening on the rear lots. Unfenced gardens encourage children and dogs to run over them. Even in the multiple houses of the low-rental section special allotments for gardens have been set aside betweeen the double alleys described above. Garden space may also be had on unoccupied land, distant from the houses. There is a garden adviser whose services are available for the community.

CONCLUSION.

Many of the building projects in Morgan Park, as well as certain features of its social life, have been approached in an experimental manner. The factors in modern town-planning science as applied to industrial towns, can be accurately ascertained, the manager believes, only in that manner. Town planning in the sense here used applies to the whole social structure rather than to the narrower field of building construction and town site surveying only.

One of the considerations worthy of note is the attempt to avoid unnecessary duplication in buildings provided for educational and religious purposes, boarding facilities for single men and women, public service and social and recreational organizations. Duplica-

tion in small store facilities has been avoided. Another is the endeavor to stimulate and direct gardening, playground activities, and indoor and outdoor amusements for children and adults, public entertainments, domestic science, night school work, and hygienics. And a third is the attempt to assist the residents of an industrial town under company management in developing a civic league or community club to take an interest in matters concerning the relations of one resident with another and their joint relation to the company, so that company control may be exercised to the minimum and self-government developed to the maximum degree believed to be consistent with the proper administration of the property.

The management has avoided the issuing of printed regulations or prohibitions, preferring the plan of suggestion and example in obtaining cooperation with its work. It is realized that the company has gained by securing more efficient and contented employees, while the employees have gained through the improved environment created, among other gains being probably better houses for a relatively less rental.

These advantages, however, can only be maintained permanently so long as the steel corporation retains title to the land or transfers title to the community for cost plus a reasonable profit. If the steel corporation or the community allows speculators or investors to capitalize community benefits into land values and to charge rents based on the principle of charging what the "traffic will bear," the housing and social conditions in Morgan Park will become like those in all other communities where unrestricted private ownership of land flourishes, as exemplified in neighboring individually owned and operated suburbs where improvements have not kept pace with housing development, where many relatively low grade houses have been put up, where, in a word, all the conditions of a boom town exist.

EFFECT OF THE AIR HAMMER ON THE HANDS OF STONECUTTERS.

BY ALICE HAMILTON, M. D.

During the spring of 1917 the Bureau of Labor Statistics began the study of a curious condition in the hands of stonecutters which seemed to follow the use of the air hammer in cutting and carving stone. The information came from the limestone workers of Indiana, but inquiry showed that the same affection was to be found among workers in other branches of the stone trade. The bureau then authorized a visit to the limestone belt of Indiana, the granite cutting centers in Quincy, Mass., and Barre, Vt., the marble shops of Long Island City, and the sandstone mills of northern Ohio.

Since the condition in the men's hands, which was the object of this inquiry, comes on under the influence of cold, I made my visits during January, February, and March of 1918, on days when the temperature was between 14° F. and 34° F. I discovered a very clearly defined localized anemia of certain fingers, which is undoubtedly associated with the use of the air hammer and which, while it lasts, makes the fingers numb and clumsy, causing the workman more or less discomfort and sometimes hampering his work.

The pneumatic hammer consists of a handle containing the hammer, which is driven by compressed air, and is said to deliver from 3,000 to 3,500 strokes a minute. The amount of air delivered through a hammer can be controlled by a valve in the pipe conveying the air, and the air escapes through an exhaust opening in the handle itself. This handle is held in the right hand in various ways, sometimes with the palm of the hand down and all the fingers grasping the handle equally, or it may be held between the thumb, middle, and index fingers, very much as a pen is held. Hammers are of various sizes; there is the small half-inch hammer, the medium five-eighths or three-fourths inch, and the large 1-inch hammer. The tool (the chisel) is held by the left hand against the hammer and with the cutting edge pressed against the stone. Italian workmen usually slip the tool between the little and ring fingers, so that it rests against the side of the little finger, where a large callus develops. Other workmen grasp the tool with all four fingers. In either case the little and ring fingers, being nearest the cutting end of the tool, are pressed most closely against it in order to guide it.

The conditions under which stone is cut differ somewhat for the four kinds of stone. In the limestone region of Indiana and in the sandstone region of Ohio there are large mills, heated somewhat in winter so that the temperature is perhaps 10° or rarely 20° higher indoors than outside. This would mean that when the thermometer stands at 15° F. the working atmosphere will be at about freezing point, or perhaps as high as 38° F. In Quincy and in Barre granite is cut in sheds, which in the former town are wide open, while in Barre they are inclosed and sometimes slightly warmed. They are, however, colder than the western mills, and in very cold weather work has to be suspended. The marble shops in Long Island City are inclosed and usually better heated than any of the other stonecutting shops I visited. I did not see a place in any mill, shop, or shed where a man could warm his hands conveniently.

The air hammer is used in cutting all four kinds of stone but not to the same extent in all. Limestone cutters use it almost all the time. When one enters a mill in the limestone region the stonecutters, with a very few exceptions, are all seen to be using the air hammer. It is rare

to see more than two or three men wielding the mallet, unless they are apprentices who are required to use it. In cutting limestone the air hammer can be used both for shaping the block of stone, a process known as "roughing out," and for cleaning up or making a smooth surface. Many men say that the roughing out should really be done with the mallet, but in practice the air hammer is used. Limestone cutters use all sizes of tools; the carvers use the smaller ones chiefly or entirely. Marble cutters come next in their use of the air hammer. They work more with the mallet than do the limestone men, but the greater part of their work is with the pneumatic tool, and usually the smaller sizes.

Granite cutters can not use this machine for shaping the block. That must be done by hand, because the stone is so hard. For dressing the surface they use two machines, a large heavy surfacer with a big handle which is grasped in both hands and held upright, the tool pressing on the surface of the stone; and a smaller "bull-set" or "four-point," which also has a fairly large handle and a short tool, and which is also held perpendicularly in both hands and pressed against the surface of the stone. The tool in both these machines is held in place by the hammer and stone, never grasped or guided by the left hand. For lettering and carving, however, the granite worker uses the same sort of air hammer as is found in marble and limestone mills, and there are granite workers who use this tool all day long, but these are the exception. As a rule the men I questioned in the granite sheds use it only four, five, or six hours a day.

In sandstone the air hammer seems to be of little use. A mill I visited near Amherst, Ohio, had five air hammers for 30 men, and that number was quite sufficient. Sandstone does not require much tooling. It is used chiefly for paving stone, curbstones, grindstones, and exterior building stone. Much of the tooling required is done by hand, for the nature of the stone makes work with the air hammer difficult or impossible. I questioned 15 sandstone cutters and was told by 6 that they had never used the air hammer at all. Two had formerly used it in marblework, but not in sandstone, and 7 used it now and then for sandstone, but hardly more than half an hour during the day.

A description of one or two of the more marked cases of anemia in the fingers will show just what this condition is. The first one is a limestone cutter whom I saw early in the morning when the temperature was about 14° F. He had been out of doors for over half an hour, and in order to be able to show me his hands in a typical condition he had refrained from rubbing them violently and swinging his arms about, as he would ordinarily do to restore the circulation. The discomfort, however, had grown so intense in his fingers that he could

not bear it any longer and almost at once after I arrived he began rubbing and kneading and shaking his hands, The four fingers of his left hand were a dead greenish white and were shrunken, quite like the hand of a corpse. The whiteness involved all the little finger to the knuckle, but in the other fingers it stopped midway between knuckle and second joint. As he rubbed his hand the contrast between fingers and hand increased and at one stage it was very striking, the crimson and slightly swollen hand meeting the white, shrunken fingers abruptly, without any intermediate zone. On the palmar side the condition was not so distinct, for the skin was too thick and calloused to allow the color to show well.

The right hand was much less affected, the little finger escaped altogether, the three others were white, but not dead white, as far as the second joints, and there was a ring of white around the second phalanx of the thumb. After vigorous massage and beating of his arms back and forth over his chest, the blood gradually filled the fingers and the appearance then was fairly normal, showing only a moderately purplish red color, and no swelling.

This man is 39 years old and has cut stone for 22 years. While using the ordinary tools of his trade he had no trouble of this kind. Nine years ago he began to work with the air hammer and during the second winter after that he noticed that the ring finger of the left hand had begun to "go white." Gradually the little finger became involved, then the others, and, to a less extent, the fingers of the right hand. The trouble has progressed through the years and is still increasing. There is a good deal of pain in the fingers, especially on a cold morning. As long as the dead-white condition lasts there is no real pain, but discomfort enough to make him stop work and get the blood back into his fingers, for the stroke of the hammer on the tool he holds in the left hand is peculiarly intolerable when the fingers are white. As the blood comes back there is some sharp pain but it does not last. At no time, however, does the left hand feel quite natural, he is always conscious of it, indeed his whole left side, including the foot, feels differently from the right. If he holds his hands up for a few minutes they grow numb and this is annoying when he tries to read a newspaper and must continually put it down to coax the blood back into his hands. He has lost sensitiveness in the fingers, so that he can not put his left hand in his pocket and distinguish a coin by the touch; he must look at it to see if it is a dime or a nickle. He is clumsy in the morning when buttoning his clothes and lacing his boots. If he works all day with the hammer he has a restless, disturbed night.

The second man is a marble cutter who has followed his trade for 20 years and has had trouble with his fingers from the fifth year on

He uses the small tool almost entirely. The four fingers of the left hand were white, the little finger over the whole extent, the next two over the two distal joints, the index over the first joint. On the right hand the tips of all four fingers were white and there were irregular streaks of white along the index and middle fingers. This man complained of the pain in his fingers both when they were white and when the blood first began to come back, but his chief complaint was of nervousness from the vibration of the hammer; he said it upset him, made him "as nervous as a kitten," spoiled his sleep, made him irritable. Though he is troubled chiefly in winter, he can not put his hands in cold water in summer without making his fingers "go white." In winter, if he is working indoors he is not really hampered by the numbness in his fingers, but he can not do any fine work out of doors if the weather is at all cold for the numbness makes his fingers clumsy.

The third is a granite cutter who has used the air hammer for 18 years and who began to feel the effects in his fingers after two years. Now his left hand shows all of the little, ring, and middle fingers involved and all but one-third of the index finger. On the right hand most of the index and middle fingers and the tips of the ring and little fingers are blanched, but not so strikingly so as the fingers of the left hand. He is "bothered" a good deal by the numbness in winter and it comes on whenever he handles a cold tool, after which he finds it hard to do any fine work till he has managed to get the circulation started again.

There is no need to multiply these descriptions. With a few variations the men from whom full histories could be obtained told much the same tale. These stonecutters are exceptionally good material for such a study, for they are intelligent men, usually of good education and able to note and describe their symptoms clearly. There is among some of them a tendency to dwell perhaps too much on the nervous disorders which they believe are caused by the tiring vibrations of the hammer, and which give them a good deal of worry. Of nearly all of the men, however, this is not true. Many of them have no complaint at all, except of the actual condition in the hands, but others suffer from more or less distressing symptoms which they think are caused by the vibrating hammer. The most common symptom is covered by that vague term "nervousness." They say that they feel jumpy and irritable, upset by a slamming door, unable to settle down after a full day's work with the tool. Their sleep is disturbed and restless, and they have buzzing or ringing in the ears. The numbness in the hands is inconvenient, for they can not hold a newspaper or a book for any length of time without being forced to put it down, and rub and knead their hands. Sometimes they have

to sleep with the left arm hanging down from the bed, or the numbness will waken them, and then they must get up and swing the arms about or bathe the hands in hot water. Some of them are not troubled at all in summer, others get numb fingers on chilly days, or if they put their hands in cold water. A few men complain of trouble with the left foot, which is colder than the right.

The blanching of the fingers is very much the same in all these cases, usually involving in right-handed men the little, ring, and middle fingers of the left hand, seldom the index and never the thumb, while on the right hand it is usually the tips of all the fingers and perhaps the larger part of the index and part of the thumb, but the whiteness on the right hand is less uniform and less striking than on the left, and this hand may escape entirely. There is sometimes a patch of white in the palm of the left hand. In left-handed men the condition in the hands is reversed. Many men told me that the white area on their hands sometimes extended as far as the wrists on the ulnar side, but I never saw it reach even quite to the knuckles.

There are several reasons why the left hand is more affected than the right. In the first place a greater effort must be made by the left hand in grasping the tool, holding one end against the hammer, and guiding and pressing the other end along the surface of the stone. The fingers often clasp the tool so tightly that the blood is driven from them, and this, together with the vibration of the tool from the blows of the hammer and the influence of the cold, seems to set up a condition in the blood vessels which leads to spasmodic contractions and the resulting blanched and shrunken condition. The right hand can hold the larger hammer more loosely and can shift it in different ways during work, and the vibrations are not felt so severely as in the left hand.

Some men continue to be liable to attacks of white fingers even after they have given up stonecutting for several years. I found 8 men of whom this is true, 4 of them formerly granite cutters, 2 workers in marble, and 2 in limestone. They have not cut stone for periods ranging from 4 to 12 years, but they still have numb, white fingers at times in cold weather. One of the granite workers came into the office of the union while I was there, and I was struck at once by the dead white, shrunken condition of his left hand. He told me that he was no longer cutting granite, had not worked in the shed for four years, yet the attacks still occur.

It is very important to know whether this condition of the hands affects the men's skill or strength, whether it lessens their earning capacity in case they wish to take up other work than stonecutting. Few of the men whom I saw complained of loss of sensation in the fingers great enough to hamper them, except when the fingers were

actually numb. The majority noticed no change at all during the intervals between attacks of numbness. But, of course, an occupation which had to be carried on in the cold might be impossible, just because the numbness would inevitably come on. For instance, one man had tried to work in an automobile repair shop, and found that on a cold day he could not pick up or hold small screws or small machine parts with his left hand. Another had taken up work which involved handling a crowbar sometimes, and when he did this in winter his left hand would grow numb and so clumsy that he could not use it with skill. The only men who complained of clumsiness in their own work from numb fingers were marble workers who require a high degree of skill and who find that cold weather often makes it impossible for them to do their best work, especially if they are out of doors.

There were altogether 123 workmen in the three branches of soft stone, marble, and granite work whom I examined, and I found only 17 who had not had the so-called "dead fingers." If we omit those who sought me out in order to show me their hands and who might be looked upon as picked cases, there remain 102 whom I saw in the mills and who were not selected at all, but taken as they came. Only 16 of these were quite free from the trouble.

The condition is so common in the limestone, marble, and granite industries that any inquiry about it meets with instant response. One does not have to stop to explain and describe. In Quincy and in Barre many of the granite workers are Italians who speak little English, but as soon as they understood my question they would hold up in answer one, two, three, or four fingers of the left hand, but often would shake the head when I then pointed to the right hand. It had been suggested to the Bureau that the agitation about this condition among the Indiana limestone men had been influenced by the fact that at the time there was a controversy between the employers and the union concerning the use of this air hammer; but there was no controversy in the granite or marble shops, and yet the testimony given by the men in these two fields was much the same as that given by the limestone men. Marble cutters and limestone cutters are obliged to use the air hammer more continuously than are the granite cutters, and from these two classes of men I heard more complaint of discomfort and pain from the use of the tool than I heard from the granite cutters, who as a rule do not use it for more than half their working hours.

Among sandstone cutters spastic anemia of the fingers is not found. I visited a mill in which 15 men were at work at the time and the only ones who had ever had dead fingers were 3 former marble cutters. They had used the air hammer in marblework and their fingers had

shown the effect, but in working with sandstone they had used it so little that the trouble was passing away. The other 12 either used it not at all or very little. This is the rule in sandstone work, and the result is that dead fingers are not found among the men in this branch of the stone trade.

The men who show no effects from the air hammer usually attribute their immunity to a more skillful use of the tool. They tell one that they hold the chisel lightly and never cramp their fingers round it, or they wind thick cotton or wool round the left hand to protect it from the cold. However, I have seen blanched fingers in many men who wore thick gloves on their left hands. One marble worker told me that the condition of the machine made a great deal of difference. He always had trouble with his hands if he worked in a shop where they used old hammers and did not keep them in order, for these grow loose and the tool slips unless it is held tightly and the vibration is worse. With a new small tool he has no trouble at all. Certainly some men can use the air hammer for long periods and show no effect from it. I saw a limestone carver who had worked with it 23 years, a granite cutter who had done so for 18 years all day long, and 2 marble cutters who had used it quite steadily for 15 years, and none of them had any numbness of the fingers.

There can be no reasonable doubt that this spastic anemia of the stonecutters' fingers is caused by the use of the air hammer. The more continuously it is used, the greater the number of men affected and the more pronounced the condition. The greatest complaint is heard from the limestone cutters and marble workers who use the air hammer for the greater part of their working time. Granite cutters have numb fingers also, but do not seem to experience the discomfort that men in the other two branches do, and most granite workers do not use the hammer much more than half their time. Sandstone cutters use it little or not at all and this is the one stone trade in which numb fingers are almost unknown. Not one man was found in any of the stone trades who had this condition of the hands and had not used the air hammer.

SUMMARY.

Among men who use the air hammer for cutting stone there appears very commonly a disturbance in the circulation of the hands, which consists in spasmodic contraction of the blood vessels of certain fingers, making them blanched, shrunken, and numb.

These attacks come on under the influence of cold, and are most marked, not while the man is at work with the hammer, but usually early in the morning or after work. The fingers affected are in right-handed men the little, ring, middle, and more rarely, the index of the left hand, and the tips of the fingers of the right hand, with some-

times the whole of the index finger and sometimes the thumb. In left-handed men this condition in the two hands is reversed.

The fingers affected are numb and clumsy, while the vascular spasm persists. As it passes over there may be decided discomfort and even pain, but the hands soon become normal in appearance and as a usual thing the men do not complain of discomfort between the attacks. There are no serious secondary effects following these attacks.

The condition is undoubtedly caused by the use of the air hammer; it is most marked in those branches of stonework where the air hammer is most continuously used and it is absent only in the one branch where the air hammer is used little or not at all. Stonecutters who do not use the air hammer do not have this condition of the fingers.

Apparently once the spastic anemia has been set up it is very slow in disappearing. Men who have given up the use of the air hammer for many years still may have their fingers turn white and numb in cold weather.

According to the opinion of the majority of stonecutters, the condition does not impair the skill in the fingers for ordinary interior stonecutting and carving, but may make it impossible for a man to do outside cutting in cold weather or to take up a skilled trade which exposes the hands to cold.

The trouble seems to be caused by three factors—long continued muscular contraction of the fingers in holding the tool, the vibrations of the tool, and cold. It is increased by too continuous use of the air hammer, by grasping the tool too tightly, by using a worn, loose air hammer, and by cold in the working place. If these features can be eliminated the trouble can probably be decidedly lessened.

FREIGHT HANDLERS ON PASSENGER-FREIGHT STEAMERS ON THE GREAT LAKES.

BY EMIL FRANKEL.

The freight handlers, sometimes called deck hands, represent a type of labor peculiar to the passenger-freight carrying vessels of the Great Lakes. While the work of the freight handlers ordinarily is that of longshoremen or stevedores, they also sail on the vessel, and thus become a part of the crew. The trips which these passenger-freight steamers make are usually short ones. They touch ports on their voyage at which men are not readily available to do the loading or unloading of cargo. Some places are touched at night and stops are made only long enough to discharge freight and take on cargo. It becomes necessary therefore to carry men aboard the vessel who may be called and set to work at any time of the day or night.

There are about seven passenger-freight lines plying from the ports of Chicago, Detroit, and Cleveland, which in the operating of their boats requires the services of freight handlers. The number of freight handlers carried aboard ship ranges from 5 to 30, depending upon the size and the run of the vessel, and the bulk of the cargoes, and is further subject to industrial and seasonal changes.

Freight handlers are generally hired by the first mate and usually work under the direction of one of the mates. Their work is principally that of loading or unloading the cargo. They are given heavy hand trucks for wheeling the freight from the pier into the freight deck where they stow it away. While they have nothing to do with the navigation of the vessel, some of the freight handlers have to help make the ship fast and take care of the lines. The handling of the freight requires much bodily strength, but little skill. The work being of low grade, the compensation therefor is correspondingly low, and for that reason attractive only to certain types of workers. A description of their types and racial and national composition would be interesting, but an attempt clearly to define them would, because of the great variety and complexity of types, be very difficult.

As the freight handlers are largely recruited from the workers of large cities, it is but natural that they should reflect the particular racial composition and the general industrial status of the cities from which they come. Among these men may be found the "down and outs" who drift to the water front in search of any kind of a job; men, perhaps, who did not succeed in their trades or callings, or have broken down through drinking and are little fitted for regular work. There will be found the recently arrived immigrant who finds this kind of work a suitable makeshift, and the unemployed from the trades and industries to whom the work offers temporary means of obtaining food and shelter.

When there is an abundance of labor there is little difficulty in securing a sufficient number of men to fill the complement. There is usually a large number on hand to take the places of those who leave and to fill the gaps in the complement when the boat is ready to sail. During times when there is a scarcity of labor some companies have found it necessary to engage a man—perhaps a man who has himself been a freight handler and is thoroughly acquainted with them—for the special purpose of going into the lodging-house districts to "round up" men.

As explained previously, the work of a freight handler is generally considered to be a low type of labor, and the rates of wages have been at a correspondingly low level. For quite a number of years there have been little changes in the wage rates paid to this class of labor,

and it is only in the last two years, due largely to increased industrial activities and scarcity of men, that there have been some increases in the rates of wages paid. Most companies put a premium on the steady worker and have offered double rate of pay and sometimes more, to the man who works continuously for a certain period, usually for more than a week.

In 1914 and 1915, freight handlers were paid at the rate of 50 cents per day and board, and of $1 to those who worked steadily for seven days or more. In 1916 and 1917, years of favorable employment situation, the daily wage rate was 75 cents, which was later increased to $1.25; $1.75 per day was paid during the same period to those who sailed on the same vessels continuously for a week or more. During 1917 some of the companies experienced difficulty in obtaining a sufficient number of men to work for the daily rate quoted above, and they changed the method, paying freight handlers 25 cents per hour for actual hours worked.

As freight handlers are not a part of the regular navigation crew, they do not, when the boat is out of port, have to stand watches, required by law of employees in the deck and engine departments. As stated previously, however, freight handlers may be required to work at any time of the day or night. Their hours of labor, generally speaking, are very irregular, and the length of the periods of continuous employment shows great variance. This may be ascribed to the industrial and seasonal fluctuations to which the movement of freight is subject, to the character of the freight to be carried, to the regularity or irregularity with which freight is delivered at the piers, to the length of the stays in port, and to weather conditions.

Because of these great variations in the working hours, it would be interesting to show existing conditions on all boats employing freight handlers and for the entire season. This, however, would be entirely beyond the scope of the present article. The following table, showing the actual hours worked by freight handlers on a boat running from Chicago to near-by points on the western shore of Lake Michigan, during a normally busy period of the summer season, may serve as a typical example.

HOURS OF LABOR OF FREIGHT HANDLERS FOR THE SEVEN DAYS ENDING JULY 13, 1917, ON ONE BOAT SELECTED AS TYPICAL.

Day.	Duration of periods of work on each specified day.									
	From—	To—	From—	To—	From—	To—	From—	To—	From—	To—
July 7	6.30 a.	8.00 a.	8.30 a.	12.00 m.	1.15 p.	1.45 p.	3.00 p.	3.15 p.	3.45 p.	4.00 p.
July 8	10.15 a.	12.00 m.	3.15 p.	4.15 p.	4.45 p.	5.30 p.	.....	.....	.....	.....
July 9	9.00 a.	9.30 a.	11.15 a.	12.00 m.	1.00 p.	3.00 p.	4.00 p.	4.30 p.	5.30 p.	7.15 p.
July 10	1.15 a.	2.45 a.	5.00 a.	6.00 a.	7.00 a.	10.15 a.	11.00 a.	12.00 m.	1.15 p.	2.15 p.
July 11	5.15 a.	6.15 a.	7.30 a.	12.00 m.	1.15 p.	3.45 p.	4.45 p.	5.15 p.	5.45 p.	7.00 p.
July 12	3.45 a.	6.00 a.	7.00 a.	9.00 a.	10.30 a.	11.45 a.	2.15 p.	2.45 p.	3.30 p.	4.00 p.
July 13	5.15 a.	6.15 a.	7.30 a.	12.00 m.	1.00 p.	4.00 p.	4.30 p.	5.00 p.	5.30 p.	7.30 p.

HOURS OF LABOR OF FREIGHT HANDLERS FOR THE SEVEN DAYS ENDING JULY 13, 1917, ON ONE BOAT SELECTED AS TYPICAL—Concluded.

Day.	Duration of periods of work on each specified day.				Total time worked.	Time within which work was completed.
	From— To—	From— To—	From— To—	From— To—		
					H. m.	H. m.
July 7	5.30 p. 6.00 p.				6 30	11 30
July 8					3 30	7 15
July 9					5 30	10 15
July 10	2.45 p. 3.15 p.	4.00 p. 5.30 p.	6.00 p. 7.15 p.	10.15 p. 11.30 p.	12 15	22 15
July 11					9 45	13 45
July 12	4.30 p. 5.30 p.	6.00 p. 7.00 p.	10.15 p. 11.45 p.		10 00	20 00
July 13					11 00	14 15
Total					58 30	

Thus, on July 7, work for freight handlers on this boat began at 6.30 a. m. and lasted until 8 a. m. After a recess of half an hour work was continuous until 12 o'clock noon. After a pause of 1 hour and 15 minutes, the handling of freight was taken up again and, with three interruptions, one lasting 30 minutes, one 1 hour and 15 minutes, and the third 1 hour and 30 minutes, continued until 6 p. m. The actual time worked during this day was 6½ hours, though the span during which these hours were completed was 11½ hours. The next day, there being little freight to be moved, work did not begin until 10.15 a. m., and though the freight handling did not stop until 5.30 p. m. the actual working time amounted to only 3½ hours. July 9 was a comparatively easy day, the day's work ending at 7.15 p. m. The next day, however, the men were called to handle the freight soon after midnight, working until 2.45 a. m. After a rest of 2 hours and 15 minutes they set to work again at 5 a. m., and with seven interruptions of work lasting from half an hour to 3 hours, they finally quit work at 11.30 p. m. The actual working time for this day was 12 hours and 15 minutes, though it took 22 hours and 15 minutes within which to complete this time. The next morning, July 11, work began at 5.15 a. m. and lasted until 7 p. m., during which time the actual working period was 9 hours and 45 minutes, and the time within which this was completed was 13 hours and 45 minutes. On July 12 the men began work at 3.45 a. m. and worked, with seven pauses of varying length, until 11.45 p. m., requiring 14 hours and 15 minutes of outside time in which to complete the 11 hours of actual time worked. The hours of work on July 13 were similar to those of July 11.

During the pauses in the work the freight handlers are free to lounge around the freight deck or go to their quarters. Some of these pauses are needed for meals, others for necessary sleep, though sleeping hours during the night are extremely irregular and in some

cases hardly long enough to offer sufficient rest, as the preceding table shows.

The following table gives a summary of the actual hours of work and the time required within which to complete these hours, and covers 110 working days of freight handlers on two passenger-freight boats, one plying from Chicago to points on the eastern shore, the others to points on the western shore of Lake Michigan:

WORKING DAYS OF FREIGHT HANDLERS CLASSIFIED ACCORDING TO HOURS WORKED AND HOURS WITHIN WHICH WORK WAS COMPLETED.

Actual hours worked.	Number of working days for which the interval in which these hours were completed was—											
	2 and under 4	4 and under 6	6 and under 8	8 and under 10	10 and under 12	12 and under 14	14 and under 16	16 and under 18	18 and under 20	20 and under 22	22 and under 24	Total.
2 and under 3	2											2
3 and under 4		2	1				1					4
4 and under 5		2	2	2						1		7
5 and under 6		1	4	2	3							10
6 and under 7			6	2	1	1						10
7 and under 8				1	3			1	2			7
8 and under 9					2	3	1	1	4			11
9 and under 10					4	7	2		3	2	1	19
10 and under 11					1	3	6	1	3	4	1	19
11 and under 12							3			3	3	9
12 and under 13							2		1	1	4	8
13 and under 14										2		2
14 and under 15										1		1
15 and under 16									1			1
Total	2	5	13	7	14	14	15	3	14	14	9	110

During 40 working days, representing a little over 36 per cent of the total number, the actual time worked by freight handlers was less than eight hours; during 30 days—27.3 per cent—the actual working hours were between 8 and 10; during 28 days, a little over 25 per cent of the total days, the actual time worked was between 10 and 12 hours; and during 12 days, representing nearly 11 per cent of the total number of days, the actual hours of work ranged from 12 to 16.

Though the number of actual working hours shown in this table may not be in excess of the hours of work in other industries, the time within which these hours were completed—that is, the interval between the time of beginning of the first period of work and the time of ending of the last period, in some cases is excessively long. During 27 days, 24.5 per cent of the total, the time necessary within which to complete the actual hours of work was less than 10 hours; during 43 days, 39.1 per cent of the total, the time within which work was completed ranged from 10 to 16 hours; and during 40 days, 36.4 per cent of the total, the actual hours of work required 16 to 24 hours in which to complete them. Long and irregular hours are, however, not the only characteristic feature of this kind

of employment; the conditions under which freight handlers live aboard the vessel must also be considered. Sleeping accommodations provided for freight handlers in many cases are poor and it is frequently asserted that the food served to them is of inferior quality. They are usually quartered in one large room in the forward hold of the boat, which is fitted out with bunks, the room frequently holding from 20 to 30 men. Mattresses and blankets only are supplied.

The method of serving food to the freight handlers varies and in some cases is very primitive. Some of the boats have so-called mess rooms furnished with wooden benches and bare wooden counters. In the case of a number of boats having no such mess rooms the food is brought out to the freight deck in large pans and the men scramble to fill their tin pans and cups, sitting around on the deck to eat.

It is frequently maintained, and not always by the owners of the vessels, that inasmuch as many of these men belong to a rather low type of workers, whatever living accommodations may be afforded them are quite sufficient for their needs, and that they would not appreciate and care to take advantage of improved conditions, even if they should be offered them.

It may be true that among these freight handlers are found the shiftless and the chronic casual workers, who in their decision to stay on a boat for any length of time may be little influenced by the kind of living conditions, but it seems to be a fact that wherever there has been an improvement in the living conditions, the men have been more likely to sail for longer continuous periods. This is shown in the following figures, in which the numbers of freight handlers working certain continuous periods on three different package-freight boats during the year 1917 are compared. Two of these boats ply between Chicago, Racine, and Milwaukee, the other plies between Chicago and points on the eastern shore of Lake Michigan.

NUMBER OF DAYS WORKED BY FREIGHT HANDLERS ON THREE PASSENGER-FREIGHT STEAMERS DURING THE YEAR 1917.

Number of days worked.	Freight handlers working specified number of days on—					
	Boat No. 1.		Boat No. 2.		Boat No. 3.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
½ day	286	11.6	22	1.9	37	3.0
1 day	459	18.6	33	2.8	58	4.7
1½ days	454	18.4	91	7.7	69	5.6
2 days	536	21.6	82	7.0	119	9.7
2½ days	85	3.4	60	5.1	75	6.1
3 days	122	4.9	66	5.6	80	6.5
3½ to 6½ days, inclusive	150	6.1	108	9.2	181	14.8
7 days	244	9.9	344	29.3	209	17.0
7½ to 14 days, inclusive	130	5.3	286	24.3	322	26.3
14½ days and over	6	.2	83	7.1	77	6.3
Total	2,472	100.0	1,175	100.0	1,227	100.0

It will be noticed that the greatest shifting is on boat No. 1. This is a wooden passenger-freight vessel of the older type, in which living accommodations for freight handlers are very poor. The average length of employment for freight handlers on this boat is a little more than two and one-half days. The shifting of freight handlers is less marked on boat No. 2, a steel vessel of modern construction, and on boat No. 3, an older vessel of steel construction, on both of which it is asserted that the living conditions are much better. The average length of employment on the latter two boats is about seven days.

On boat No. 1, 78.5 per cent of the freight handlers stayed for periods of three days or less, while on boats No. 2 and No. 3 the corresponding percentages were 30.1 and 35.6, respectively. Fewer freight handlers worked for periods between three and one-half to six and one-half days, which can easily be explained by the fact that when they have worked that long they are likely to stay a little longer and earn the higher wage rate which is offered to those who have worked continuously for seven days or more. Of the men working for periods of seven days or over the percentage is 15.4 for boat No. 1; more than three times that percentage, or 49.6, for boat No. 3, both making the same runs; and boat No. 2 has nearly four times the percentage, 60.7, of boat No. 1.

It should be noted that the number of men given in the preceding table does not represent the number of different individuals who sailed on a particular boat during 1917, but may include individuals who shipped more than once on the same vessel. Whenever a freight handler quits the service of the vessel he is paid off. The time, therefore, from when he started to work until he quit and was paid off is here considered as continuous service. It does not, of course, preclude the same man coming back the next day and shipping again, in which event a new service record would be started.

Not only do the many shiftings of this class of workers here indicated take place between the boats of the same company, but also, because of the proximity of the docks of other companies, there is a considerable shifting as between the different companies. Indeed, it has been frequently asserted that the freight handler works only long enough to earn sufficient money to go on a "spree," and that he comes back to work again when all his money has been spent. While this may be true in many cases, it can not be said to apply to the whole body of men, which often seems to be implied.

An analysis of the causes of the shifting of the freight handlers would make an interesting chapter in the discussion of these workers, but the multiplicity of motives which may animate them in their desire for change makes it clearly impossible to consider them in

detail in an article of this length. Among the more tangible factors, however, that affect the length of time freight handlers stay on any one boat may be mentioned the general conditions of work, such as long hours, the runs of the boat, the carrying of heavy or light freight, sleeping accommodations, the quantity and quality of the food, and the state of the labor market ashore.

The total employment afforded to freight handlers in any one year is dependent upon features of the shipping trade peculiar to the Great Lakes. Among the most important of these are industrial and seasonal changes. More men are carried during the period when the freight movement is heavy, or during the summer months when perishable commodities, which must be transported quickly to their destination, are shipped. Few boats run during the winter time, and these carry a smaller number of freight handlers.

Though opportunities for promotion are offered to freight handlers, it seems that they do not often take advantage of them. They seldom rise to positions in the deck department; more often they take the places of coal passers, or ship in various capacities in the steward's department.

In the struggle of the organized seamen during the last few years for improvements in their calling, the conditions under which freight handlers are working and living have also been the subject for frequent discussions. But though the efforts of the seamen culminated in the passing of the Seamen's Act, the freight handlers, by virtue of the nature of their work, have been held not to be seamen and therefore not to come within the purview of this law. The union occasionally has attempted to organize these workers, but has met with little success. The reason for this is ascribed to the unusually great shifting among this class of workers, and the "unorganizable" type which they represent. The men themselves have made no concerted attempt toward improvement of their working conditions, and as long as there is an abundant supply of this type of labor it is unlikely that many changes will be made by the vessel owners.

Not only the employers of the freight handlers, but employees in other departments of the vessel, seem to regard the conditions under which freight handlers work as normal and quite suited to the nature of the men. It has been asserted repeatedly that no matter what changes were brought about, whether affecting their working or living conditions, it would make little difference in the steadiness of employment of these men. It has been shown, however, that they are amenable in some measure to better living conditions, and it is altogether probable that if these conditions were improved the men would cease to be classed among the industrial outcasts.

COST OF LIVING IN THE DISTRICT OF COLUMBIA.

SEVENTH ARTICLE—WAGE-EARNING WOMEN: HOW THEY SPEND THEIR MONEY.

As brought out in preceding articles of this series, the study of working women in the District of Columbia shows that 274 of the 600 women interviewed, or 46 per cent, received under $400 a year—approximately $8 per week; and 381, or 64 per cent, received under $500 per year, or approximately $10 per week. Thirty-one per cent lived away from home, 45 per cent were in receipt of outside assistance, 72 per cent were 21 years of age and over, and 22 per cent had dependents.

Below are given brief biographies of a few of the women workers covered by the investigation. This selection is not intended to show either the worst or the best conditions, but simply to bring out, in a general way, how working women in Washington adjust their lives to their incomes. These sketches are reproduced in substantially the same rough form in which they were originally outlined by the women themselves. In reading them it is to be remembered that the interviews took place during the early part of the year 1917 and that such items as "last year," "summer vacation," etc., have reference to the year 1916.

LAUNDRY EMPLOYEES.

Mary A. is 24 years old and has worked nine years altogether, four years of this time in a laundry She is a backer on the mangle, and is paid $5.50 a week. She lives with her parents and takes her pay envelop home to her mother, who gives her what she needs to spend each week. This includes 25 cents a day for lunch, 50 cents a week for car fare, 10 cents a week for insurance, and 5 cents every other week for church. She had $40 worth of clothes in 1916, including $2 worth of gifts.

6 waists, at $1	$6.00
1 hat	4.00
6 pairs of shoes, at $3	18.00
3 aprons, at 25 cents (gifts)	.75
1 pair of gloves (gift)	1.25
12 pairs of stockings, at 15 cents	1.80
2 corsets	2.00
Underwear and petticoats	4.00
Miscellaneous	2.20
Total	40.00

The number of pairs of shoes purchased is due to the cheap quality of shoes sold at this price and to the wet floors customary in this laundry.

Her mother does her washing and mending and Mary helps with the housework. She had no vacation last year, and only goes to the

movies occasionally, when a friend who makes more money than she does takes her.

Mrs. Clara B., who is 25 years old, has a little girl 8 years old. She is employed in a laundry and during 1916 received $5 per week until May, $5.50 from May to October, and in October was raised to $6 a week. She also had $67 alimony last year from her husband. Her mother, who lives on the other side of town, keeps her little girl without charge. Last year she bought her child $15 worth of clothes and paid 10 cents a week on her insurance. She lives with a private family nearer her work, where she pays $4 a week for board (including lunches) and lodging. She gets her board at this low figure because her friend is "good to her" and lets her have it for that amount. She helps her friend with the dishes every day and does cleaning Saturdays and Sundays. Her friend takes her to the movies occasionally. Her only expenses last year, in addition to board and lodging and expenditures for her little girl, were $66 for clothes, $7.80 for life insurance, $36 for car fare, $5 for gifts, and $2 for miscellaneous expenses.

Josephine C. has worked 13 years, four years of this time as a mangle hand in a laundry at $5 a week. She is 35 years old and has no family. Until June, in 1916, she paid $2 a week for her room, but that outlay left her so little for food that she found another room, for $1.50 a week.

This room was heated by an oil stove instead of hot water, as was the first, and she was allowed to use the kitchen to cook her food. Even with the closest economy her food cost nearly $3 a week. Her clothing during 1916 cost her $6.50, for which the following articles were obtained:

2 dresses	$3.50
1 corset	.47
Miscellaneous	2.53
	6.50
5 pairs of stockings (gifts)	5.00
2 aprons (gifts)	.50
Total value of clothes	12.00

Her doctor bill of $2.60 was paid by her sister. She spent 50 cents in car fare during her vacation of two weeks, which she took without pay.

Daisy D. started to work when she was 9 years old; she is now 34. She has been a shaker in a laundry for five years and gets $5 a week. She is one of a large family, so she gives most of her earnings to her mother. Her insurance is 10 cents a week, church costs 5 cents a week, and last year she bought $4 worth of clothes. She spends an hour a day doing dishes and cleaning for her mother, and

she does her own mending and washing and takes care of her own room. A friend takes her to the movies once in a while, and last year paid a doctor bill of $2 for her.

Mrs. Mabel E. is 18 years old. Her husband belongs to the National Guard, and has never been heard from since he went to the border two years ago. She has a little girl 2 years old, and the two are living with Mabel's parents. She was out of work for 12 weeks in 1916, but is now a mangle hand at $5 a week. Her earnings were spent as follows:

Money given to mother	$88.00
Clothing (2 pairs of shoes worth $4 were given her)	45.00
Life insurance	10.40
Car fare	20.00
Amusements (girl friend takes her).	
To little girl	26.90
Church	2.60
Miscellaneous expenses	5.10
Total expenses	198.00
Still due on clothes	10.00
Total earnings	188.00

Her clothes included—

1 suit (she is still paying for this suit at the rate of $1 a week)	$25.00
2 shirt waists, at 50 cents	1.00
1 hat	1.98
2 pairs of shoes (gifts)	8.00
12 pairs of stockings, at 25 cents	3.00
Underwear	3.00
Miscellaneous	3.02
Total for clothes	45.00

Julia F. is the bookkeeper in a laundry and has been working for three years. She gets $10 a week and two weeks' vacation with pay. She lives at home with her parents and gives her mother $5 a week. When she is buying clothes, her mother lends her money, and she pays it back, $2 a week at a time. She helps at home with the housework and shares her room with two younger children. Her expenses for 1916 were as follows:

Board and lodging paid mother (about $5 a week)	$254.80
50 cents a week to supplement lunch taken from home	13.00
Fruit, candy, and sodas	13.00
Clothing	110.00
Life insurance, 10 cents a week	5.20
Car fare, 50 cents a week	25.00
Other car fare for going to night school	9.00
Books and newspaper (including books for night school)	7.50
Amusements, about 75 cents a month	9.00
Vacation	15.00
Sickness and medicine	3.00

Dentist	$3.00
Religious purposes ($1 a month for church, 10 cents a week for Sunday school)	17.20
Gifts	34.00
Other expenses	10.30
Total expenses	529.00

No surplus or deficit.

Her clothes included—

1 suit	$25.00
3 shirt waists (1 at $2.50 and 2 at $1; gifts, $6.50)	11.00
1 dress skirt	7.50
1 coat	25.00
3 hats (1 at $4.50, 1 at $2.98, and 1 at $3)	10.48
3 pairs of shoes (1 at $6, 1 at $2.50, and 1 at $5)	13.50
2 pairs of gloves (1 pair a gift)	2.50
11 pairs of stockings	5.00
2 corsets, at $1	2.00
Underwear (mother crochets tops and she makes up garments), material	3.98
Miscellaneous	4.04
Total for clothes	110.00

Julia, 20 years old, is a normal, healthy looking girl, and her expenditures as listed are about what a normal, healthy girl would spend. She has the ambition to make herself more efficient and by careful economy is able to buy books for night-school work. She spends a moderate amount for amusements, has a two weeks' vacation, and is able to have her teeth attended to. While she had no surplus at the end of the year, she carried a 10-cents-a-week life insurance policy, and with her night-school work on shorthand and typewriting she is making herself more efficient and capable of earning a better salary in the future.

STORE EMPLOYEES.

Mabel G. lived in an orphanage until she was 11 years old. She had to get a special permit to go to work and has been working in stores ever since—for 10 years. She was a stock girl at $6 a week until April of 1916, when she got ptomaine poisoning in the employees' lunch room and had to go to a hospital for 13 weeks. The store paid her hospital bill, but did not pay her wages during that time, so she spent the rest of the year paying up her expenses. When she came out of the hospital she secured a position as sales girl in another store at $6 a week. Until February, 1917, she lived with a married sister and paid her $2.50 a week for board and lodging. In February, because of the death of the sister's husband, the two women broke up housekeeping and took two unfurnished rooms for $7.50 a month, sharing expenses equally. Their food averages $4 to $5 a

week. They do all their own cooking, laundering, and mending, and make their own underwear. Mabel says they spend almost all of Sunday getting ready for the next week. In addition to board her expenses in 1916 were as follows:

Sick benefit insurance, at 5 cents a week (in the first store it was 8 cents a week)	$4.98
Clothing	48.00
Car fare (she walks to work)	3.90
Gas stove	1.98
Sickness and medicine	1.50
Dentist (she paid this bill at the rate of $1 a week)	18.00
Church	.60
Gifts	3.00
Other expenses	3.45
Total (except board and lodging)	85.41

There was no surplus.

Her expenditures for clothes were—

1 dress (material $3.50, dressmaker $6.25)	$9.75
3 shirt waists (1 at $1.98, 2 at $1)	3.98
1 coat	8.90
2 hats (1 at $2, and 1 at $3.98)	5.98
3 pairs of shoes (1 at $5, 1 at $2.35, 1 at $2.50)	9.85
1 apron	.55
1 pair of gloves	.98
5 pairs of stockings	1.45
1 corset	1.00
Underwear (material $2)	3.00
Miscellaneous	2.56
Total for clothes	48.00

In 1916 she worked at night for five weeks as cashier for a moving-picture house, but according to her account one of the store girls "peached" on her and a policeman informed her the next day she could have only one position at a time. She has a little brother living at the orphanage and as soon as she finishes paying the board money she owes for the time she was sick, she expects to start saving money to get him out. Mabel is the sort of a girl who, if given a chance and enough wages so that she could have a small surplus above the necessary living expenses, would have the ambition and health to study and equip herself for more efficient service. At present she feels fortunate if she is able to meet her pressing obligations and she uses up so much energy making this effort that it is not possible for her to do more.

Ruth H. is a ribbon clerk. She graduated from the eighth grade 19 years ago and has been working ever since as a sales girl. She is paid $11 a week. She lives at home with her parents and pays $5 a week for board and lodging, but as she is a member of a large

family, she helps with the housework one hour and a half in the morning and an hour at night, and spends most of Sunday doing additional cleaning and housework. Her expenditures for clothes in 1916 were as follows:

2 shirt waists	$2.00
3 dress skirts	5.00
1 hat	2.00
1 pair of shoes	4.00
2 pairs of gloves	1.09
6 pairs of stockings	3.00
1 corset	1.39
Miscellaneous	3.00
Total for clothes	21.48

In 1916 she took a vacation of a week and two days without pay. This cost her $10 in addition to the loss of her wages. She paid 10 cents a week on her life insurance and 10 cents a week for sick benefit and this is as near as she came to saving anything during that year. While her rate of pay might be a living wage for a younger woman, it is not large enough to enable her to lay by any amount for her old age.

Minnie I. is an attractive looking girl 19 years of age. She has been a sales girl for a year at $6 a week. Her cousin, with whom she lives, works at the Bureau of Engraving and Printing and Minnie hopes to get an appointment there soon as a result of the civil-service examination taken by her. The two girls have a three-room flat, heated by a latrobe stove, Minnie paying for the food and her cousin paying for heat, rent, and light. The raw food costs the two close to $4 a week and they do all their own cooking and housework. Minnie puts up her lunch at home. Her cousin takes her to the movies when she goes. Her expenditures last year were as follows:

Board and lodging (50 weeks)	$200.00
Clothing	67.15
(She does her own laundry.)	
Life insurance	5.20
Car fare	30.00
Vacation without pay (2 weeks)	6.00
Oculist	9.00
Church, at 10 cents a month	1.20
Gifts	2.00
Other expenses	2.45
Total expenditures	323.00
Deficit	13.00
Total earnings (plus gift of a $10 coat)	310.00

Ida J. is 36 years old and has been working for seven years. She receives $8 a week selling suits and in the busy season earns an aver-

age of about $2 per week additional as commission. She lives in a furnished room for which she pays $2.50 a week, and her meals average as follows: Breakfasts, 10 cents; lunches, 10 to 15 cents; dinners 25 cents. These are 1916 prices. She was sick for four weeks in 1916, and had to stay out of work for six weeks more to recuperate. Her expenses for the year were:

Furnished room	$115.00
Meals	161.00
Clothing	55.00
Laundry	23.00
Life insurance	13.00
Books, papers, etc	1.00
Amusements	.40
Vacation	2.30
Sickness and medicine	32.50
Church	7.80
Gifts (sister)	22.00
Miscellaneous (including visit to sister every third Sunday)	30.00
Total expenses	463.00
Deficit (owed to sister)	43.00
Total earnings	420.00

Her recreation consists of visits to her sister once a month.

This woman is a nervous invalid. It is not known how healthy she was when younger, but her years of insufficient food, lack of recreation and suitable doctor and dentist care, have had their effect and it won't be many years before she is unable to work at all. She attempted last year to secure free medical attention at one of the dispensaries, but since it was open only from 12 to 1 o'clock, and this was her lunch hour, she did not have enough time to wait her turn in the crowded room.

Eva K. is a little girl, 17 years old, who has been working a year. She was first a bundle wrapper at $3 a week. In September, 1916, she was raised to $3.50 and sold underwear, and in December she received $4 as a sales girl in the basement. Until October she lived with her family and paid from $1.50 to $2 a week for board. In addition she did from three to four hours' work a day at home, helping to care for her small brothers and sisters, washing dishes, sweeping, and cooking. This overtaxed her strength, so her aunt took her in and since then things have been easier for her. Her total expenditures for 1916, in addition to board and lodging, were $84. This included $20 spent for clothes as follows:

3 shirt waists (2 at 59 cents and 1 at 98 cents)	$2.16
2 dress skirts (1 at 59 cents and 1 at $1)	1.59
1 hat	.98
3 pairs of shoes (1 at $1.50, 1 at $1.98, and 1 at $2.35)	5.83

1 pair of gloves	$0.50
8 pairs of stockings	1.00
2 corsets	1.14
Underwear	2.90
Miscellaneous	3.90
Total for clothing	20.00

Mary L. is a saleswoman who earns $12 a week. She is 32 years old and has been working for 12 years. She lives with her parents. She had additional income in 1916 of $27.75, including $22 worth of clothes. Her expenditures for the year were as follows:

Board, lodging, and laundry paid to parents	$231.00
Lunches and meals out	39.20
Fruit, candy, sodas, etc	13.00
Clothing	194.55
(Laundry done with that of the family.)	
Life insurance	5.20
Car fare	29.70
Amusements (a friend provides most of them)	2.60
2 weeks' vacation, 1 with pay, at small summer resort	20.00
Charity	1.50
Church	.50
Gifts, Christmas and other	25.00
Other expenditures	17.50
Total expenditures	579.75
Saved	50.00
Total earnings	629.75

Mary's expenditures for clothes are large. On the other hand, she had almost no expenditures for amusements.

TELEPHONE EMPLOYEES.

Eva M. is an "information" operator. She is 33 years old and has been working for 10 years. Her annual earnings for 1916 were $603.69. She lives with her sister and pays for the laundry, food, and gas, while her sister pays for the rent and insurance. She spent $97 for clothes in 1916, and her other expenses included items for car fare, books, papers, and magazines, vacation, doctor, church, and gifts. She came out even at the end of the year. In addition to doing cooking, marketing, and cleaning—spending about two hours on week days and six hours on Sunday—she does some of her own laundering and altering of clothes.

The stories of the other telephone girls are similar to the one above. Most of those interviewed lived at home and paid board and lodging to their families ranging from $120 to $442. Their expenditures for clothes ranged from $45 to $193, many of them buying clothes on credit.

EMPLOYEES OF THE BUREAU OF ENGRAVING AND PRINTING.

Annie N. is an operative at $2.24 a day. She has been working 10 years and is 31 years old. She has an unfurnished room with a private family for which she pays $15 a month, and her heat and light cost $1 a month. Her expenses for the year 1916 were as follows:

Room, unfurnished	$180.00
Heat and light	12.00
Lunches and meals	234.00
Clothing	148.00
Laundry	39.00
Labor organization	4.80
Car fare to and from work	23.50
Other car fare	14.50
Furniture	25.00
Books, papers, and magazines	2.60
Amusements	10.40
(She stayed home during vacation.)	
Dentist	25.00
Church	2.60
Gifts	25.00
Other expenses	4.60
Total expenditures	751.00
Owed for clothes	30.00
Total earnings	721.00

In common with many wage-earning women in the District, Annie buys her clothes on credit. Annie's budget for clothes in 1916 is as follows:

1 suit	$25.00
1 dress	15.00
8 shirt waists	16.00
1 dress skirt	5.00
1 coat remodeled	30.00
3 hats	17.00
3 pairs of shoes	18.00
4 aprons	1.00
2 pairs of gloves	3.00
5 pairs of stockings	2.45
1 pair of corsets	2.00
Underwear and petticoats	10.00
Miscellaneous	3.55
Total for clothes	148.00

Helen O. lives at home with her parents and pays them $25 a month for board, lodging, and laundry. She is a high-school graduate, has worked 11 years, and is 29 years old. She earns $2.24 a day as an operative. Her expenses for the year 1916 tell the character of the girl better than anything else could.

Board, lodging, and laundry	$287.50
Lunches	24.00
Clothing	79.25
Life and benefit insurance	32.40
Labor organizations	4.80
Car fare to and from work	23.50
Other car fare	11.50
Shorthand and typewriting course by mail	88.00
Books, papers, and magazines (including books for course)	4.10
Amusements (went to theater 4 times)	4.00
Vacation	30.00
Dentist	2.00
Charity (donations customary in the bureau for deaths, sickness, etc., among fellow employees)	10.00
Church	25.00
Gifts	30.00
Other expenses, including a trip to New York at the death of an uncle	69.78
Total expenditures	725.83

No surplus or deficit.

Jeannette P., 28 years old, lives at home with her parents, but it has fallen to her lot to support her grandmother, who lives with them. The family is large, and she is the only member unencumbered and without other financial obligations. She has been working 8½ years and earns $2.24 a day as an examiner. In addition to $502 paid for board and lodging for herself and grandmother she does all the marketing and some of the cooking for the family and she gave $60 to her grandmother last year for clothes and other expenses. She was unable to go away for her vacation and spent very little on herself for amusements or clothes. She saved $25 in the Christmas fund.

Mary Q. is an ambitious young woman, 28 years old. Her family is large and poor, and in 1916 she gave $552 out of her total earnings of $724.29 toward the general expenses. She is eager to study and took a general academic course in 1916 for four months, which cost her $19.60, including books. In order to do this she cut her expenses down to the barest necessities. She stayed home for her vacation and got along with $70 worth of clothes for the year. Few girls were found entirely foot-loose and free and Mary's situation is one of the many encountered during the investigation. Often the girls at home seemed to be carrying the heaviest load, for in addition to financial assistance given, they shared the misfortunes of sickness and unemployment of the group in which they lived and were required to put in many hours a day doing household work and answering the thousand and one calls upon their time and strength which members of a family feel free to make.

Mrs. Minnie R. is an example of an entirely different domestic situation from that of Mary Q. She is a widow with twin girls whom she keeps in a school near Washington. During 1916 she spent $160.60 for their board, lodging, and clothes. She is 40 years old, has been working seven years, and makes $2.24 a day as a trimmer. In 1916 she used the 30 days' vacation allowed by the Government, to have her tonsils removed. Her expenses for the year were as follows:

Unfurnished room, $6 a month	$72.00
Lunches and meals out, about 75 cents a day	243.20
Clothing	129.00
Laundry	24.00
Life and benefit insurance	2.60
Labor organizations	4.80
Car fare to and from work	23.50
Other car fare	13.00
Amusements	15.00
Sickness and medicine	15.00
Dentist	20.00
Oculist	8.00
For the children	160.60
Charity, donations	2.40
Church	2.60
Gifts	10.00
Other expenses	10.48
Total expenses	756.18
Owed for clothes	30.00
Total earnings	726.18

Rose S. is 33 years old, has been working thirteen and one-half years, and is paid $2.24 a day as a worker in the trimming room. Until June, 1916, she lived with a cousin and gave her $22.50 a month. The first of June she took a small apartment and rented one room to a girl friend. She has the girl's washing done with her own and furnishes her with ice and gas. Each buys her own food and prepares it. Rose makes practically all her own clothes, including her underwear, trims her own hats, and does her mending, in addition to cleaning her apartment and cooking her meals. At the time she was interviewed she was working overtime in the bureau and found it very difficult to accomplish all these things. She kept an accurate account of her expenditures for 1916, and the following are her expenses as given from her account book:

Rent for unfurnished apartment, 7 months	$143.50
Fuel and light, 7 months	10.50
Board and lodging paid to cousin, 5 months, including laundry	112.50
Food bought, 7 months	90.90
Lunches	9.90

Clothing	$87.00
Laundry for 7 months	31.00
Life and benefit insurance	3.00
Labor organizations	4.80
Other organizations	2.00
Car fare to and from work	23.50
Other car fare	5.20
Books, papers, and magazines	2.00
Amusements (friend furnishes these).	
Vacation	20.00
Sickness and medicine	42.00
Dentist	20.00
To sister's children	33.00
Charity, collections in the bureau	12.00
Religion	2.60
Gifts	20.00
Other expenses	64.02
Total expenses	739.42
Due on doctor bill	23.00
Total income (including $7.25 worth of gifts)	716.42

It is interesting to note the items spent for clothes by this girl, who exercised the closest economy, by buying carefully and making her own garments. The amounts spent are as follows:

Material for 2 dresses (1 at $4 and 1 at $6)	$10.00
Material for 8 shirt waists	7.00
Material for 2 dress skirts	1.60
1 sweater	5.00
3 hats (1 at 10 cents, 1 at 98 cents, and 1 at $7)	8.08
5 pairs of shoes (1 at $8, 2 at $3.50, and 1 at $5)	20.00
8 aprons, at 25 cents	2.00
4 pairs of gloves	4.25
15 pairs of stockings ($5 worth of gifts)	12.28
2 corsets	7.00
Underwear (including gift of material of $2.25)	5.25
Miscellaneous	4.54
Total for clothes	87.00

LABOR AND THE WAR.

MOBILIZING AND DISTRIBUTING FARM LABOR IN OHIO.

BY W. M. LEISERSON, TOLEDO UNIVERSITY, TOLEDO, OHIO.

The Ohio branch of the Council of National Defense is applying a new idea to the problem of meeting the shortage of farm labor. The idea is that plain business sense, business methods, a business organization, and hard facts as to supply and demand are as necessary in getting labor to the farms as they are essential to any business that supplies the farmer with machinery, tools, or anything else that he needs. The impression has seemed to be that the farmer can "pick up" all the labor he needs without any business organization to supply him, while distributing agents, warehouses, wholesalers, retailers, and mail-order houses are necessary to supply him with nails, plows, overalls, and all the other things. The farmer has for years been suffering from lack of labor, mainly because the business of supplying labor for the farms has never been organized in a systematic way. The present shortage of farm labor is not new. It is but the ordinary condition, accentuated by the military draft and the fact that high wages in munition factories have drawn largely on the rural populations. And now, as in years past, when farm labor can not be "picked up," it is not to be expected that widespread publicity and indiscriminate calls for thousands of hands will somehow bring the laborers to the farms.

Several years of experience in conducting the Ohio free employment bureaus convinced Mr. Fred C. Croxton, chairman of the labor committee of the Ohio Council of Defense, and Mr. C. H. Mayhugh, State director of employment, that labor can not be supplied in this way. When the United States entered the War, therefore, they set about establishing a complete system of labor exchanges for the State of Ohio, as described in the MONTHLY REVIEW for June, 1917.

At the outbreak of the War, in April, 1917, the Industrial Commission of Ohio was conducting seven State-city labor exchanges. The management of these was transferred to the Ohio branch of the Council of National Defense, and 15 additional bureaus have been established by the council in cooperation with local communities that pay part of the expense. Each office serves a district consisting of several counties and the whole system is controlled and directed by a central clearing house located at the statehouse in Columbus.

Instead of making appeals for farm hands in the newspapers, a business organization was established. Only by establishing labor exchanges for farmers and workers, conducted by efficient employment agents, can anything practical and permanent be accomplished toward supplying the farmers' needs for labor. By May 1, 1917, the whole system of employment exchanges was in fair working order, and the first season more than 7,000 farm hands were sent to farmers in Ohio. The employment bureaus received reports that 5,000 of these 7,000 were at work on the farms to which they were sent, although the actual number working was probably greater than that.

The directors of Ohio's employment system were gratified with this record, but realized that no effective organization for supplying farm labor could be built in a few months and that temporary campaigns launched when the need for labor was greatest could not insure a steady flow of labor to meet the changing needs of the farms of the State. During the year, therefore, they devoted themselves to increasing the efficiency of the 22 employment bureaus, developing better business methods, training their employees to be better employment agents, bringing the agents into closer contact with the central office, and devising the best methods of transferring labor from one part of the State to another through the central office.

The results of this work may be seen in the increased business done by the Ohio employment bureaus in supplying labor for all industries of the State. In the 10 months ending February 28 they registered 463,400 workers, men and women. In other words, they were able to mobilize a supply of labor for the State amounting to over 30,000 workers[1] per month. For this labor they had available, on the average, 30,000 jobs every month, and each month they actually placed in positions close to 23,000 wage earners. The exact total of placements for the 10 months was 229,221.

During the 10 months, also, the superintendents and employees of the 22 employment bureaus familiarized themselves with the labor needs of their districts as well as with the available labor supply. Before the present spring demand for farm labor was actually felt the directors of Ohio's employment system not only had a centralized business organization for marketing labor efficiently, but knew just what was needed to get the demand for farm labor accurately registered and had developed the best methods of meeting that demand.

In February the machinery of the Ohio Employment Service was started working for the farmers of Ohio. First came an order from the central office that no "drive" for farm labor should be made until the actual and bona fide demand for farm workers had

[1] The figures for the 10-month period contain a good many duplications caused by the same individual applying for employment on more than one day during the month. It is safe to say that the number of different individuals who applied for work averaged between 30,000 and 35,000.

been accurately ascertained. In July and August the farmers of Ohio need very many extra hands; in March they need but few. One of the first principles of efficient employment management is not to advertise for help long in advance of actual needs. It disorganizes the labor market.

The superintendent of each of the 22 employment offices was instructed, therefore, to canvass his district to ascertain the demand for farm labor for the first month of the season only. Following are parts of the instructions sent to each local office from the central office:

During the remainder of the month of February and up to March 6 every superintendent will either personally, or through an assistant especially qualified to handle farm labor, make a tour of his entire district to ascertain the demand for farm workers up to and including April 6. Take no orders for help needed after April 6.

The method of canvassing farm labor demands in the district will be to arrange meetings in schoolhouses, village halls, churches, or any other convenient meeting places where the superintendent or his assistant can make addresses, telling what the bureaus can do for the farmers, how the offices work, what is expected of the farmers, etc. The special blanks (Form 28) for farm help should be passed around among the farmers present and at the end of the meeting the speakers should collect the orders and make sure that they are properly filled out.

In this work of arranging and addressing farm meetings, the granges, equity societies, and other agricultural organizations should be utilized, and the assistance of county agricultural agents, county and township food commissioners should be enlisted. But whenever anyone except the superintendent or an employee of the employment offices solicits orders for farm help, the superintendent must see to it that he understands thoroughly the use of our blanks and the methods of the offices in filling orders.

Only responsible persons shall take orders for farm help. This is emphasized because the employment bureaus regard their calls for help as in the nature of contracts. The farmer must state definitely the kind of work he has, the number of men wanted, the probable duration of the employment, the wages paid, and any other material facts relating to the wage bargain. He is held responsible for hiring the farm hand if one that meets the conditions of his order is referred to him by the employment office. No business man would think of shipping his goods except with an understanding of this kind, and no statements of demand for farm labor are worth the paper they are written on unless they are based on such orders as the Ohio employment bureaus insist on.

The instructions to superintendents regarding the handling of farm labor require further that some machinery shall be established in every rural community for connecting its farm-labor demands promptly and efficiently with the employment office of the district and through that with the organized labor market of the whole State.

The method of establishing local representatives of the employment bureaus in rural communities will be to get the town clerk, secretary or president of the grange, bank cashier, or any other interested citizen to act as agent for the employment office in his community. The work of the offices and filling of blank forms should be carefully explained to the agent and a supply of the new form No. 28 should be left with him. At the public meetings as well as in the country newspapers, publicity should be given to the fact that the employment bureau has this local agent and that orders may be left with him, and he will see that they receive proper attention.

It should be remembered that the local agents are not to conduct employment offices. They are to send in orders to the employment bureau, and farm hands are to be sent to this agent when it is not possible to refer them directly to the farmers. Also when it is impossible to get farmers on telephone during the day, local agents can be called to take care of men whom the employment office is prepared to send to work. * * * The agent is to see that the man reaches the farmer who ordered him, and that a proper report is returned to the employment bureau.

Following these instructions, each of the superintendents of the 22 employment bureaus toured his district for about two weeks, addressing farmers' meetings, taking orders for farm help, and arranging for local representatives. At the end of that time 476 local agents had been appointed and instructed how to receive orders for farm help, transmit them to the employment bureau, and see to it that the farmer received the help he ordered. In addition to this employment organization the Agricultural and Food Division of the Ohio Council of Defense was directed to assist in dealing with the farm-labor problem. Under this division there are paid county agricultural agents in 37 counties. These are scientifically trained men whose business it is to advise farmers on technical matters, like selection of seed, preparation of soil, drainage, and elimination of pests. Associated with them is an unpaid food commissioner in each county and under him are township food commissioners, one for each township. All of these are connected closely with the employment organization through a chief farm agent who is located at the central office and works directly with the State director of employment. The assistant professor of rural economics at the Ohio State Agricultural College has been detailed to give all his time to this important work.

Through these various agencies the employment system is made to reach into every rural community of the State. The employment service conducts a continuous canvass of the actual farm-labor needs of the State as represented by direct orders from farmers, and at the same time is trying to meet those needs every day by supplying men from the employment offices.

Every month the demand for farm workers and the number supplied are balanced, and a special report of the unfilled orders is sent to the central office by each district superintendent. Following is a copy of the blank form for these reports:

REPORT OF FARM CANVASS.

Summary of unfilled active farm orders to April 6.

[Do not report dead orders.]

1. Number of married men called for at each classified wage:

$18–$20	$20–$25	$25–$30	$30–$35	$35–$40	$40 and up.

2. Number of single men called for at each classified wage:

$18–$20	$20–$25	$25–$30	$30–$35	$35–$40	$40 and up.

3. Number of older boys called for at each classified wage:

Under $15	$15–$18	$18–$20	$20–$25	$25–$30	$30 and up.

4. Number of female workers called for .....
5. Number of day workers called for at each classified wage:

Under $1 w. board.	$1–$2 w. board.	$2 and up w. board.	$2–$3 no board.	$3 and up no board.	Piece-work.

AGENCIES ESTABLISHED.

Name of agent.	Address and phone.	Arrangements.

The first monthly report showed that on March 6, 1918, the employment offices had unfilled orders on their books for 660 experienced farm hands. This small number may surprise people who hear stories of tens of thousands needed in each State. Of course 660 does not represent the total demand for farm labor in Ohio, but it represents a very substantial portion of the men needed during March. It is the demand that remained unsupplied after the offices had sent more than 500 men to the farms in February. Only an accurate statement of this kind, balancing supply and demand each month, can be of any practical value in dealing with the farm-labor shortage in a practical way. The ordinary estimates that gain wide publicity group the whole season's needs together

and leave out of account the men who are going to work on farms from day to day. As the season goes on the demand for farm labor will increase from month to month. But the supply of this labor also increases with the greater demand. During the first half of March incomplete returns from Ohio's employment offices showed 412 men placed on farms out of 690 referred to farmers, as compared with 291 placed and 575 referred for the whole month of February. When the heaviest demands come in harvest time there may be plenty of labor available. It can not be said four months in advance that this harvest labor is lacking. We can speak accurately of supply and demand only from month to month.

These monthly reports, together with the superintendents' canvasses, the farmers' meetings, and local agencies, are all in preparation for a businesslike advertising campaign. "The central office," says a circular from the State director of employment, "will conduct a campaign of publicity, which must be supplemented by local publicity in each district, to be handled by the superintendent. All publicity will be designed to accomplish one end, namely, to get farmers to register their actual needs for help at their local employment office and to supply these needs through the employment offices."

Here may be noted two highly important features of Ohio's method of handling the farm-labor problem. In the first place, no campaign of publicity was undertaken until a careful canvass had been made of the actual demand for farm help based on orders from the farmers themselves. In the second place, instead of publishing statements in the newspapers about hundreds of men needed in certain counties and inducing farm hands to go to those places on this vague information, to find perhaps that too many had already applied or that terms of employment were not satisfactory, the Ohio plan is to make each man apply at the nearest office and assure him of a job at wages that he will accept before he is asked to go to a distant place.

The usual unintelligent methods of dealing with the problem are well illustrated by a canvass conducted by an Ohio newspaper early in February. "Shortage of labor perils Ohio crops" ran the headline. "Canvass of 250 communities * * * shows State and Nation face crisis." The story went on to say:

> Questionnaires, which have been answered by county agents, agricultural associations, farm employment agencies, and other authoritative spokesmen, have covered every phase of the problem and have met with a frank and comprehensive response by men and organizations capable of correctly sizing up the situation.
>
> A digest of these answers shows that Ohio needs at least 30,000 additional farm hands to maintain last year's standard of production.
>
> Reports from every county in the State indicate farmers are willing to pay higher wages and offer greater privileges to farm hands than ever before. Farmers in all counties also are willing to employ men for longer periods than formerly.

The next day this was supplemented by the following statement:

The original estimate placing at 30,000 the number of farm workers needed this summer to maintain last year's agricultural, dairy, fruit, and truck farm production is altogether too low. The actual requirements are nearer 50,000 men.

Chambers of commerce, civic associations, educational authorities, Y. M. C. A.'s, Boy Scouts, and women's clubs are urged to join hands to enlist both permanent and temporary help and to establish farm-labor bureaus, which will act as clearing houses capable of meeting any demand which farmers may make on them.

It is just this sort of loose statement regarding labor demand and supply, and the well-meaning but inexperienced efforts of civic associations suggested by the newspaper, that Ohio's employment system is designed to overcome. When calls for 30,000 and 50,000 farm hands are scattered through the country without a centralized organization to control the supply of labor that responds to the advertising, the result often is to oversupply certain counties while causing a greater scarcity in other districts, and the waste and confusion in our labor markets are thereby increased.

Contrast this with the methods of the Ohio system of employment bureaus. The central office directs its State-wide publicity to the definite purpose of filling the demand for farm help registered at the employment offices. It instructs each district superintendent to insert in his local newspapers this advertisement:

THINK IT OVER

Figure It Out

What wages will you have to make in the city to have $20 or $25 clear at the end of the month? You can do it in the country.

TAKE A JOB ON THE FARM

Apply at

STATE-CITY EMPLOYMENT BUREAU

128 Huron St., Toledo.

The applicant is directed to the employment bureau where he can be told definitely about the kind of work available, the wages and other conditions concerning which he wants information, and where he can be examined as to his fitness for farm work. Thus men are assured of positions before they go to the country, none are induced to leave their city positions on mere rumors of high wages on the farms, and the available supply of farm labor is controlled and directed so as to prevent the oversupplying of some counties while others are short of labor.

Mere patriotic appeals will not induce men to accept lower wages in the country and leave better-paying jobs in the city, especially when they know that the profit goes to the farmer and not to the Government. But for most of the unskilled workers in the city farm labor can be shown to have distinct material advantages. The Ohio

Employment Service, therefore, advertises these advantages in circulars like the following, sent to all the newspapers of the State:

FARM JOB VERSUS CITY JOB.

FOR A MARRIED MAN.

A farm job at $30 per month equals a city job at $105.
A farm job at $35 per month equals a city job at $110.
A farm job at $40 per month equals a city job at $115.
A farm job at $45 per month equals a city job at $120.

Not considering the possibility of raising some stock or produce on shares, which is usual.

FOR A SINGLE MAN.

A farm job at $25 per month equals a city job at $80.
A farm job at $30 per month equals a city job at $85.
A farm job at $35 per month equals a city job at $90.
A farm job at $40 per month equals a city job at $95.

Not considering possible share in profits or privileges such as use of horses.

These figures are based on the following comparison of monthly cost of living on the farm and in the city.

MARRIED MAN ON FARM AND IN CITY.

	Farm job.	City job.
Total cash income	$40	$100
House rent	Furnished.	$20
Groceries	Exchange of produce.	33
Milk	Furnished.	4
Fuel	$3	5
Light	1	2
Insurance and taxes	3	3
Clothes and incidentals including car fare, lunches amusements, church, etc.	13	28
Total expenses	— 20	— 95
Balance saving	20	5

SINGLE MAN ON FARM AND IN CITY.

Total cash income	$35	390
Board and room and laundry	Furnished.	$37
Insurance	$3	3
Clothes	6	9
Car fare, lunches, amusements, church, lodge, athletics, charities, etc.	5	20
Total expense	— 14	— 69
Balance saving	21	21

When the men attracted to the employment offices by the methods and the publicity just described are given detailed information regarding specific farm jobs, it is surprising to see how many can be found to fill the places on farms. Many farmers offer comparatively high wages—$40, $45, and more per month—with board, lodging, laundry, and other privileges. Places like these are filled with little difficulty. Other positions at from $30 to $40 per month are attrac-

tive to many low-paid, irregularly employed workers in the cities. The greatest difficulty is in filling the places that pay $30, $25, and less per month. Twenty-five and thirty dollars per month were the wages commonly paid before the War, and much of the scarcity of farm labor is due to the fact that wages offered by farmers have not kept pace with the rise in wages generally. Another part of the publicity work of the employment system is, therefore, to distribute accurate information regarding prevailing market rates of wages. Farmers are told both through the newspapers and directly through the employment offices that the prevailing wages are $35 to $45 per month and that they will have less trouble getting the help they need if they pay the market rates.

The most difficult of all the problems of meeting the demand for farm labor lies in the fact that the source of the supply of labor is far removed from the places of employment. It is difficult enough to try to transfer labor in an orderly way from one city to another, but to send men from the city to the country raises almost insurmountable obstacles. The central office of the Ohio Employment Service has devised means for handling both of these problems.

The superintendent of each employment bureau sends to the central office a list of the positions that he can not fill from his own applicants and a list of the applicants for whom he can not find positions in his own district. The applicants and the positions are both carefully described in detail. This is done both for farm hands and all other classes of workers. The central office lists these on a special form and gives each item a serial number indicating the branch office to facilitate reference to the positions or applicants in telegrams or over long-distance telephones, which are constantly used in transferring labor. Following are sample copies of these lists:

POSITIONS REPORTED TO CENTRAL OFFICE.

Date.....

Serial No.	Description.	Supt.
J 320 CH	One farm hand; married man with small family; colored preferred; $1.50 per day of 10 hours; the prevailing rate will be paid during harvest, corn cutting, and corn husking.....	.....
J 321 CH	One experienced farm hand; single; $1.25 per day with room, board, and laundry; this is on a large, up-to-date farm and they want a man for general farm work; a good place for a good man.....	.....
J 322 CH	One experienced farm hand; single; general farm work; $35 per month with room, board, and laundry.....	.....
J 323 CH	One experienced farm hand; single; 17 to 20 years old preferred; must be accustomed to the care and handling of horses; $1 per day with board, room, and laundry.....	.....
J 324 CH	Three farm hands; married; $1.50 per day with the usual considerations, such as house, garden, milk, and meat allowances; general farming.....	.....

APPLICANTS AVAILABLE FOR TRANSFER.

Date.....

Serial No.	Description.	Supt.
A 161 AT	Commercial salesman. Married. 45 years of age. Minimum salary demanded, $100 and expenses. Has had a varied experience in his line and has been manager of a general merchandise store.....	.....
A 162 E	Farmer. Widowed. 41 years of age. Lifetime experience, sober and industrious. Willing to rent a farm of 100 to 300 acres on the halves. Prefers to locate in Marion or Seneca Counties.....	.....
	Farmer, with 3 sons able to work; all 4 can milk. This family would like to secure work in a large dairy or dairy and fruit farm; have had considerable experience in such work. Will work by the year or rent a farm on the shares, or will pay cash rent if stock and tools are furnished. Have lived in the city two years but are anxious to get onto a farm again. No stipulation in regard to minimum wage.....	.....
A 164 AT	Licensed fireman. Married. 28 years of age, white. Minimum wage demanded, $100 per month. Can give good references.....	.....
A 165 CN	Accountant—General office man. Married. 56 years of age. Minimum wage demanded, $30 per week.....	.....

These lists are sent daily to each of the 22 employment offices and a revised list is made once a week. The last column provides a place for the superintendent to keep his records. More than 18,000 wage earners have been transferred from one part of the State to another by means of this method in the eight months that it has been in use.

Sometimes the applicant pays his own fare. Often the employer pays the fare outright. More often the fare is advanced by the employer and later deducted from the wages. This is most common in the cases of farm hands. But all of these methods require tact and skill in handling and both employer and worker must have a great amount of confidence in the efficiency and integrity of the employment system before it can succeed in sending large numbers of workers to distant places of employment.

To the newspapers and many well-meaning but uninformed enthusiasts mobilization of labor for farm production requires merely an office for correspondence and registration to bring farmers and farm hands together, or else it means recruiting an "agricultural army" that presumably will march through the country doing a little planting here, harvesting there, or "fixing up the farms." To the experienced employment agent supplying farm hands is a serious business that requires skill and infinite pains and care. It means a long and tedious process of trying to fit men of unknown ability and reputation into a line of work that requires every variety of skill, and at the same time the man must be such as to fit properly into the farmer's family. The farm hand must not only know how to do his work; he must also become a member of the farmer's household, eat at his table, and sleep in his house.

For work of this kind, careful and efficient organization is needed—an organization that covers every county and every rural district. Such an organization can not be built in a day or by the efforts of volunteers and civic associations. Realizing this the Ohio Branch of the Council of National Defense called to its assistance at the very beginning all the men it could find in Ohio who had experience, skill, and knowledge of employment problems and the employment business. These men were set to work organizing and supervising the work of the employment offices, training the employees of the offices to become expert employment agents, developing efficiency in office management, in the details of properly judging and recording men's qualifications—creating, in short, a complete labor market organization for the State, unified and controlled through the central office and State director of employment in Columbus. The very first year, this policy of building for permanence showed remarkable results in the placement of farm hands, in the systematic mobilization of almost 20,000 men for building the cantonment at Chillicothe, and in the business of supplying labor for Ohio industries generally. As the War goes on the organization shows itself better and better able to deal with the labor-market problems that develop. And when the War is over and millions of workers have to be returned to normal activities from the Army and from war industries, the Ohio Employment Service will be ready to handle in its State this most difficult of all the problems.

SOCIAL RECONSTRUCTION PROGRAM OF THE BRITISH LABOR PARTY.

The following draft report on the general policy of the British Labor Party on "Reconstruction" has been prepared by a subcommittee of the executive for the consideration of the party; and is submitted by the executive to the annual conference at Nottingham, not for adoption, but with a view to its being specifically referred to the constituent organizations for discussion and eventual submission to the party conference to be arranged for June next, or a special conference should a general election render it necessary. [Jan. 1, 1918.]

LABOR AND THE NEW SOCIAL ORDER—A DRAFT REPORT ON RECONSTRUCTION.

It behooves the Labor Party, in formulating its own program for reconstruction after the war, and in criticizing the various preparations and plans that are being made by the present Government, to look at the problem as a whole. We have to make clear what

it is that we wish to construct. It is important to emphasize the fact that, whatever may be the case with regard to other political parties, our detailed practical proposals proceed from definitely held principles.

THE END OF A CIVILIZATION.

We need to beware of patchwork. The view of the Labor Party is that what has to be reconstructed after the war is not this or that Government department, or this or that piece of social machinery; but, so far as Britain is concerned, society itself. The individual worker, or for that matter the individual statesman, immersed in daily routine—like the individual soldier in a battle—easily fails to understand the magnitude and far-reaching importance of what is taking place around him. How does it fit together as a whole? How does it look from a distance? Count Okuma, one of the oldest, most experienced, and ablest of the statesmen of Japan, watching the present conflict from the other side of the globe, declares it to be nothing less than the death of European civilization. Just as in the past the civilization of Babylon, Egypt, Greece, Carthage, and the great Roman empire have been successively destroyed, so, in the judgment of this detached observer, the civilization of all Europe is even now receiving its death blow. We of the Labor Party can so far agree in this estimate as to recognize, in the present world catastrophe, if not the death, in Europe, of civilization itself, at any rate the culmination and collapse of a distinctive industrial civilization, which the workers will not seek to reconstruct. At such times of crisis it is easier to slip into ruin than to progress into higher forms of organization. That is the problem as it presents itself to the Labor Party to-day.

What this war is consuming is not merely the security, the homes, the livelihood, and the lives of millions of innocent families, and an enormous proportion of all the accumulated wealth of the world, but also the very basis of the peculiar social order in which it has arisen. The individualist system of capitalist production, based on the private ownership and competitive administration of land and capital, with its reckless "profiteering" and wage slavery; with its glorification of the unhampered struggle for the means of life and its hypocritical pretense of the "survival of the fittest"; with the monstrous inequality of circumstances which it produces and the degradation and brutalization, both moral and spiritual, resulting therefrom, may, we hope, indeed have received a death blow. With it must go the political system and ideas in which it naturally found expression. We of the Labor Party, whether in opposition or in due time called upon to form an administration, will certainly lend no hand to its revival. On the contrary, we shall do our utmost

to see that it is buried with the millions whom it has done to death. If we in Britain are to escape from the decay of civilization itself, which the Japanese statesman foresees, we must insure that what is presently to be built up is a new social order, based not on fighting, but on fraternity—not on the competitive struggle for the means of bare life, but on a deliberately planned cooperation in production and distribution for the benefit of all who participate by hand or by brain—not on the utmost possible inequality of riches, but on a systematic approach toward a healthy equality of material circumstances for every person born into the world—not on an enforced dominion over subject nations, subject races, subject colonies, subject classes, or a subject sex, but, in industry as well as in Government, on that equal freedom, that general consciousness of consent, and that widest possible participation in power, both economic and political, which is characteristic of democracy. We do not, of course, pretend that it is possible, even after the drastic clearing away that is now going on, to build society anew in a year or two of feverish "reconstruction." What the Labor Party intends to satisfy itself about is that each brick that it helps to lay shall go to erect the structure that it intends, and no other.

THE PILLARS OF THE HOUSE.

We need not here recapitulate, one by one, the different items in the Labor Party's program, which successive party conferences have adopted. These proposals, some of them in various publications worked out in practical detail, are often carelessly derided as impracticable, even by the politicians who steal them piecemeal from us! The members of the Labor Party, themselves actually working by hand or by brain, in close contact with the facts, have perhaps at all times a more accurate appreciation of what is practicable, in industry as in politics, than those who depend solely on academic instruction or are biased by great possessions. But to-day no man dares to say that anything is impracticable. The war, which has scared the old political parties right out of their dogmas, has taught every statesman and every Government official, to his enduring surprise, how very much more can be done along the lines that we have laid down than he had ever before thought possible. What we now promulgate as our policy, whether for opposition or for office, is not merely this or that specific reform, but a deliberately thought out, systematic, and comprehensive plan for that immediate social rebuilding which any ministry, whether or not it desires to grapple with the problem, will be driven to undertake. The four pillars of the house that we propose to erect, resting upon the

common foundation of the democratic control of society in all its activities, may be termed, respectively:

(*a*) The universal enforcement of the national minimum;
(*b*) The democratic control of industry;
(*c*) The revolution in national finance; and
(*d*) The surplus wealth for the common good.

The various detailed proposals of the Labor Party, herein briefly summarized, rest on these four pillars, and can best be appreciated in connection with them.

THE UNIVERSAL ENFORCEMENT OF A NATIONAL MINIMUM.

The first principle of the Labor Party—in significant contrast with those of the capitalist system, whether expressed by the Liberal or by the Conservative Party—is the securing to every member of the community, in good times and bad alike (and not only to the strong and able, the well born or the fortunate), of all the requisites of healthy life and worthy citizenship. This is in no sense a "class" proposal. Such an amount of social protection of the individual, however poor and lowly, from birth to death, is, as the economist now knows, as indispensable to fruitful cooperation as it is to successful combination; and it affords the only complete safeguard against that insidious degradation of the standard of life, which is the worst economic and social calamity to which any community can be subjected. We are members one of another. No man liveth to himself alone. If any, even the humblest, is made to suffer, the whole community and every one of us, whether or not we recognize the fact, is thereby injured. Generation after generation this has been the corner-stone of the faith of labor. It will be the guiding principle of any labor government.

THE LEGISLATIVE REGULATION OF EMPLOYMENT.

Thus it is that the Labor Party to-day stands for the universal application of the policy of the national minimum, to which (as embodied in the successive elaborations of the factory, mines, railways, shops, merchant shipping, and truck acts, the public health, housing, and education acts and the minimum wage act—all of them aiming at the enforcement of at least the prescribed minimum of leisure, health, education, and subsistence) the spokesmen of labor have already gained the support of the enlightened statesmen and economists of the world. All these laws purporting to protect against extreme degradation of the standard of life need considerable improvement and extension, whilst their administration leaves much to be desired. For instance, the workmen's compensation act fails, shamefully, not merely to secure proper provision for all the victims of accident and industrial disease, but what is much more important,

does not succeed in preventing their continual increase. The amendment and consolidation of the factories and workshops acts, with their extension to all employed persons, is long overdue, and it will be the policy of labor greatly to strengthen the staff of inspectors especially by the addition of more men and women of actual experience of the workshop and the mine. The coal mines (minimum wage) act must certainly be maintained in force, and suitably amended, so as both to insure greater uniformity of conditions among the several districts and to make the district minimum in all cases an effective reality. The same policy will, in the interests of the agricultural laborers, dictate the perpetuation of the legal wage clauses of the new corn law just passed for a term of five years, and the prompt amendment of any defects that may be revealed in their working. And, in view of the fact that many millions of wage-earners, notably women and the less skilled workmen in various occupations, are unable by combination to obtain wages adequate for decent maintenance in health, the Labor Party intends to see to it that the trade boards act is suitably amended and made to apply to all industrial employments in which any considerable number of those employed obtain less than 30 shillings per week. This minimum of not less than 30 shillings per week (which will need revision according to the level of prices) ought to be the very lowest statutory base line for the least skilled adult workers, men or women, in any occupation, in all parts of the United Kingdom.

THE ORGANIZATION OF DEMOBILIZATION.

But the coming industrial dislocation, which will inevitably follow the discharge from war service of half of all the working population, imposes new obligations upon the community. The demobilization and discharge of the 8,000,000 wage-earners now being paid from the public funds, either for service with the colors or in munition work and other war trades, will bring to the whole wage-earning class grave peril of unemployment, reduction of wages, and a lasting degradation of the standard of life, which can be prevented only by deliberate national organization. The Labor Party has repeatedly called upon the present Government to formulate its plan, and to make in advance all arrangements necessary for coping with so unparalleled a dislocation. The policy to which the Labor Party commits itself is unhesitating and uncompromising. It is plain that regard should be had, in stopping Government orders, reducing the staff of the national factories and demobilizing the army, to the actual state of employment in particular industries and in different districts, so as both to release first the kinds of labor most urgently required for the revival of peace production and to prevent any congestion of the market. It is no less imperative that suitable

provision against being turned suddenly adrift without resources should be made, not only for the soldiers, but also for the 3,000,000 operatives in munition work and other war trades, who will be discharged long before most of the army can be disbanded. On this important point, which is the most urgent of all, the present Government has, we believe, down to the present hour, formulated no plan, and come to no decision, and neither the Liberal nor the Conservative Party has apparently deemed the matter worthy of agitation. Any Government which should allow the discharged soldier or munition worker to fall into the clutches of charity or the poor law would have to be instantly driven from office by an outburst of popular indignation. What every one of them who is not wholly disabled will look for is a situation in accordance with his capacity.

SECURING EMPLOYMENT FOR ALL.

The Labor Party insists—as no other political party has thought fit to do—that the obligation to find suitable employment in productive work for all these men and women rests upon the Government for the time being. The work of resettling the disbanded soldiers and discharged munition workers into new situations is a national obligation, and the Labor Party emphatically protests against it being regarded as a matter for private charity. It strongly objects to this public duty being handed over either to committees of philanthropists or benevolent societies, or to any of the military or recruiting authorities. The policy of the Labor Party in this matter is to make the utmost use of the trade-unions, and, equally for the brainworkers, of the various professional associations. In view of the fact that, in any trade, the best organization for placing men in situations is a national trade-union having local branches throughout the kingdom, every soldier should be allowed, if he chooses, to have a duplicate of his industrial discharge notice sent, one month before the date fixed for his discharge, to the secretary of the trade-union to which he belongs or wishes to belong. Apart from this use of the trade-union (and a corresponding use of the professional association) the Government must, of course, avail itself of some such public machinery as that of the employment exchanges; but before the existing exchanges (which will need to be greatly extended) can receive the cooperation and support of the organized labor movement, without which their operations can never be fully successful, it is imperative that they should be drastically reformed, on the lines laid down in the demobilization report of the "labor after the war" joint committee; and, in particular, that each exchange should be placed effectually under the supervision and control of a joint committee of employers and trade-unionists in equal numbers.

The responsibility of the Government, for the time being, in the grave industrial crisis that demobilization will produce, goes, however, far beyond the 8,000,000 men and women whom the various departments will suddenly discharge from their own service. The effect of this peremptory discharge on all the other workers has also to be taken into account. To the Labor Party it will seem the supreme concern of the Government of the day to see to it that there shall be, as a result of the gigantic "general post" which it will itself have deliberately set going, nowhere any degradation of the standard of life. The Government has pledged itself to restore the trade-union conditions and "prewar practices" of the workshop, which the trade-unions patriotically gave up at the direct request of the Government itself; and this solemn pledge must be fulfilled, of course, in the spirit as well as in the letter. The Labor Party, moreover, holds it to be the duty of the Government of the day to take all necessary steps to prevent the standard rates of wages, in any trade or occupation whatsoever, from suffering any reduction, relatively to the contemporary cost of living. Unfortunately, the present Government, like the Liberal and Conservative Parties, so far refuses to speak on this important matter with any clear voice. We claim that it should be a cardinal point of Government policy to make it plain to every capitalist employer that any attempt to reduce the customary rates of wages when peace comes, or to take advantage of the dislocation of demobilization to worsen the conditions of employment in any grade whatsoever, will certainly lead to embittered industrial strife, which will be in the highest degree detrimental to the national interests; and that the Government of the day will not hesitate to take all necessary steps to avert such a calamity. In the great impending crisis the Government of the day should not only, as the greatest employer of both brain workers and manual workers, set a good example in this respect, but should also actively seek to influence private employers by proclaiming in advance that it will not itself attempt to lower the standard rates of conditions in public employment; by announcing that it will insist on the most rigorous observance of the fair-wages clause in all public contracts; and by explicitly recommending every local authority to adopt the same policy.

But nothing is more dangerous to the standard of life, or so destructive of those minimum conditions of healthy existence, which must in the interests of the community be assured to every worker, than any widespread or continued unemployment. It has always been a fundamental principle of the Labor Party (a point on which, significantly enough, it has not been followed by either of the other political parties) that, in a modern industrial community, it is one

of the foremost obligations of the Government to find, for every willing worker, whether by hand or by brain, productive work at standard rates.

It is accordingly the duty of the Government to adopt a policy of deliberately and systematically preventing the occurrence of unemployment, instead of (as heretofore) letting unemployment occur, and then seeking, vainly and expensively, to relieve the unemployed. It is now known that the Government can, if it chooses, arrange the public works and the orders of national departments and local authorities in such a way as to maintain the aggregate demand for labor in the whole kingdom (including that of capitalist employers) approximately at a uniform level from year to year; and it is therefore a primary obligation of the Government to prevent any considerable or widespread fluctuations in the total numbers employed in times of good or bad trade. But this is not all. In order to prepare for the possibility of there being any unemployment, either in the course of demobilization or in the first years of peace, it is essential that the Government should make all necessary preparations for putting instantly in hand, directly or through the local authorities, such urgently needed public works as (*a*) the rehousing of the population alike in rural districts, mining villages, and town slums, to the extent possibly, of a million new cottages and an outlay of three hundred millions sterling; (*b*) the immediate making good of the shortage of schools, training colleges, technical colleges, etc., and the engagement of the necessary additional teaching, clerical, and administrative staffs; (*c*) new roads; (*d*) light railways; (*e*) the unification and reorganization of the railway and canal system; (*f*) afforestation; (*g*) the reclamation of land; (*h*) the development and better equipment of our ports and harbors; (*i*) the opening up of access to land by cooperative small holdings and in other practicable ways. Moreover, in order to relieve any pressure of an overstocked labor market, the opportunity should be taken, if unemployment should threaten to become widespread, (*a*) immediately to raise the school-leaving age to 16; (*b*) greatly to increase the number of scholarships and bursaries for secondary and higher education; and (*c*) substantially to shorten the hours of labor of all young persons, even to a greater extent than the eight hours per week contemplated in the new education bill, in order to enable them to attend technical and other classes in the daytime. Finally, wherever practicable, the hours of adult labor should be reduced to not more than 48 per week, without reduction of the standard rates of wages. There can be no economic or other justification for keeping any man or woman at work for long hours, or at overtime, whilst others are unemployed.

SOCIAL INSURANCE AGAINST UNEMPLOYMENT.

In so far as the Government fails to prevent unemployment—whenever it finds it impossible to discover for any willing worker, man or woman, a suitable situation at the standard rate—the Labor Party holds that the Government must, in the interest of the community as a whole, provide him or her with adequate maintenance, either with such arrangements for honorable employment or with such useful training as may be found practicable, according to age, health, and previous occupation. In many ways the best form of provision for those who must be unemployed, because the industrial organization of the community so far breaks down as to be temporarily unable to set them to work, is the out-of-work benefit afforded by a well administered trade-union. This is a special tax on the trade-unionists themselves which they have voluntarily undertaken but toward which they have a right to claim a public subvention—a subvention which was actually granted by Parliament (though only to the extent of a couple of shillings or so per week) under Part II of the insurance act. The arbitrary withdrawal by the Government in 1915 of this statutory right of the trade-unions was one of the least excusable of the war economies; and the Labor Party must insist on the resumption of this subvention immediately the war ceases, and on its increase to at least half the amount spent in out-of-work benefit. The extension of State unemployment insurance to other occupations may afford a convenient method of providing for such of the unemployed, especially in the case of badly paid women workers and the less skilled men, whom it is difficult to organize into trade-unions. But the weekly rate of the State unemployment benefit needs, in these days of high prices, to be considerably raised; whilst no industry ought to be compulsorily brought within its scope against the declared will of the workers concerned, and especially of their trade-unions. In one way or another remunerative employment or honorable maintenance must be found for every willing worker, by hand or by brain, in bad times as well as in good. It is clear that, in the twentieth century, there must be no question of driving the unemployed to anything so obsolete and discredited as either private charity, with its haphazard and ill-considered doles, or the poor law, with the futilities and barbarities of its "stone yard," or its "able-bodied test workhouse." Only on the basis of a universal application of the policy of the national minimum, affording complete security against destitution, in sickness and health, in good times and bad alike, to every member of the community, of whatever age or sex, can any worthy social order be built up.

THE DEMOCRATIC CONTROL OF INDUSTRIES.

The universal application of the policy of the national minimum is, of course, only the first of the pillars of the house that the Labor Party intends to see built. What marks off this party most distinctly from any of the other political parties is its demand for the full and genuine adoption of the principle of democracy. The first condition of democracy is effective personal freedom. This has suffered so many encroachments during the war that it is necessary to state with clearness that the complete removal of all the war-time restrictions on freedom of speech, freedom of publication, freedom of the press, freedom of travel, and freedom of choice of place of residence and kind of employment must take place the day after peace is declared. The Labor Party declares emphatically against any continuance of the military service acts a moment longer than the imperative requirements of the war excuse. But individual freedom is of little use without complete political rights. The Labor Party sees its repeated demands largely conceded in the present representation of the people act, but not yet wholly satisfied. The party stands, as heretofore, for complete adult suffrage, with not more than a three months' residential qualification, for effective provision for absent electors to vote, for absolutely equal rights for both sexes, for the same freedom to exercise civic rights for the "common soldier" as for the officer, for shorter Parliaments, for the complete abolition of the House of Lords, and for a most strenuous opposition to any new second chamber, whether elected or not, having in it any element of heredity or privilege, or of the control of the House of Commons by any party or class. But unlike the Conservative and Liberal Parties, the Labor Party insists on democracy in industry as well as in government. It demands the progressive elimination from the control of industry of the private capitalist, individual or joint-stock; and the setting free of all who work, whether by hand or by brain, for the service of the community, and of the community only. And the Labor Party refuses absolutely to believe that the British people will permanently tolerate any reconstruction or perpetuation of the disorganization, waste, and inefficiency involved in the abandonment of British industry to a jostling crowd of separate private employers with their minds bent not on the service of the community but—by the very law of their being—only on the utmost possible profiteering. What the nation needs is undoubtedly a great bound onward in its aggregate productivity. But this can not be secured merely by pressing the manual workers to more strenuous toil, or even by encouraging the "captains of industry" to a less wasteful organization of their several enterprises on a profit-making basis. What the Labor Party looks to is a genuinely scientific reorganization of the

nation's industry, no longer deflected by individual profiteering, on the basis of the common ownership of the means of production; the equitable sharing of the proceeds among all who participate in any capacity and only among these, and the adoption, in particular services and occupations, of those systems and methods of administration and control that may be found in practice best to promote not profiteering, but the public interest.

IMMEDIATE NATIONALIZATION.

The Labor Party stands not merely for the principle of the common ownership of the nation's land, to be applied as suitable opportunities occur, but also, specifically, for the immediate nationalization of railways, mines, and the production of electrical power. We hold that the very foundation of any successful reorganization of British industry must necessarily be found in the provision of the utmost facilities for transport and communication, the production of power at the cheapest possible rate, and the most economical supply of both electrical energy and coal to every corner of the Kingdom. Hence the Labor Party stands unhesitatingly for the national ownership and administration of the railways and canals, and their union, along with harbors and roads and the posts and telegraphs—not to say also the great lines of steamers which could at once be owned, if not immediately directly managed in detail, by the Government—in a united national service of communication and transport; to be worked, unhampered by capitalist, private or purely local interests (and with a steadily increasing participation of the organized workers in the management, both central and local), exclusively for the common good. If any government should be so misguided as to propose, when peace comes, to hand the railways back to the shareholders, or should show itself so spendthrift of the nation's property as to give these shareholders any enlarged franchise by presenting them with the economies of unification or the profits of increased railway rates, or so extravagant as to bestow public funds on the reequipment of privately owned lines—all of which things are now being privately intrigued for by the railway interests—the Labor Party will offer any such project the most strenuous opposition. The railways and canals, like the roads, must henceforth belong to the public, and to the public alone.

In the production of electricity, for cheap power, light, and heat, this country has so far failed, because of hampering private interests, to take advantage of science. Even in the largest cities we still "peddle" our electricity on a contemptibly small scale. What is called for, immediately after the war, is the erection of a score of gigantic "super-power stations," which could generate, at incredibly cheap rates, enough electricity for the use of every industrial estab-

lishment and every private household in Great Britain, the present municipal and joint-stock electrical plants being universally linked up and used for local distribution. This is inevitably the future of electricity. It is plain that so great and so powerful an enterprise, affecting every industrial enterprise and eventually every household, must not be allowed to pass into the hands of private capitalists. They are already pressing the Government for the concession, and neither the Liberal nor the Conservative Party has yet made up its mind to a refusal of such a new endowment of profiteering in what will presently be the life blood of modern productive industry. The Labor Party demands that the production of electricity on the necessary gigantic scale shall be made from the start (with suitable arrangements for municipal cooperation in local distribution) a national enterprise, to be worked exclusively with the object of supplying the whole Kingdom with the cheapest possible power, light, and heat.

But with railways and the generation of electricity in the hands of the public it would be criminal folly to leave to the present 1,500 colliery companies the power of "holding up" the coal supply. These are now all working under public control, on terms that virtually afford to their shareholders a statutory guaranty of their swollen incomes. The Labor Party demands the immediate nationalization of mines, the extraction of coal and iron being worked as a public service (with a steadily increasing participation in the management, both central and local, of the various grades of persons employed), and the whole business of the retail distribution of household coal being undertaken as a local public service by the elected municipal or county councils. And there is no reason why coal should fluctuate in price any more than railway fares, or why the consumer should be made to pay more in winter than in summer, or in one town than another. What the Labor Party would aim at is, for household coal of standard quality, a fixed and uniform price for the whole Kingdom, payable by rich and poor alike, as unalterable as the penny postage stamp.

But the sphere of immediate nationalization is not restricted to these great industries. We shall never succeed in putting the gigantic system of health insurance on a proper footing, or secure a clear field for the beneficent work of the friendly societies, or gain a free hand for the necessary development of the urgently called for ministry of health and the local public health service, until the nation expropriates the profit-making industrial insurance companies which now so tyrannously exploit the people with their wasteful house-to-house industrial life insurance. Only by such an expropriation of life assurance companies can we secure the universal

provision, free from the burdensome toll of weekly pence, of the indispensable funeral benefit. Nor is it in any sense a "class" measure. Only by the assumption by a state department of the whole business of life assurance can the millions of policyholders of all classes be completely protected against the possibly calamitous results of the depreciation of securities and suspension of bonuses which the war is causing. Only by this means can the great staff of insurance agents find their proper place as civil servants, with equitable conditions of employment, compensation for any disturbance and security of tenure, in a nationally organized public service for the discharge of the steadily increasing functions of the Government in vital statistics and social insurance.

In quite another sphere the Labor Party sees the key to temperance reform in taking the entire manufacture and retailing of alcoholic drink out of the hands of those who find profit in promoting the utmost possible consumption. This is essentially a case in which the people, as a whole, must assert its right to full and unfettered power for dealing with the licensing question in accordance with local opinion. For this purpose, localities should have conferred upon them facilities (*a*) to prohibit the sale of liquor within their boundaries, (*b*) to reduce the number of licenses and regulate the conditions under which they may be held, and (*c*) if a locality decides that licenses are to be granted, to determine whether such licenses shall be under private or any form of public control.

MUNICIPALIZATION

Other main industries, especially those now becoming monopolized, should be nationalized as opportunity offers. Moreover, the Labor Party holds that the municipalities should not confine their activities to the necessarily costly services of education, sanitation, and police; nor yet rest content with acquiring control of the local water, gas, electricity, and tramways; but that every facility should be afforded to them to acquire (easily, quickly, and cheaply) all the land they require and to extend their enterprises in housing and town planning, parks, and public libraries, the provision of music and the organization of recreation; and also to undertake, besides the retailing of coal, other services of common utility, particularly the local supply of milk, wherever this is not already fully and satisfactorily organized by a cooperative society.

CONTROL OF CAPITALIST INDUSTRY.

Meanwhile, however, we ought not to throw away the valuable experience now gained by the Government in its assumption of the importation of wheat, wool, metals, and other commodities, and in its control of the shipping, woolen, leather, clothing, boot and shoe,

milling, baking, butchering, and other industries. The Labor Party holds that, whatever may have been the shortcomings of this government importation and control, it has demonstrably prevented a lot of "profiteering." Nor can it end immediately on the declaration of peace. The people will be extremely foolish if they ever allow their indispensable industries to slip back into the unfettered control of private capitalists, who are, actually at the instance of the Government itself, now rapidly combining, trade by trade, into monopolist trusts, which may presently become as ruthless in their extortion as the worst American examples. Standing as it does for the democratic control of industry, the Labor Party would think twice before it sanctioned any abandonment of the present profitable centralization of purchase of raw material; of the present carefully organized "rationing," by joint committees of the trades concerned, of the several establishments with the materials they require; of the present elaborate system of "costing" and public audit of manufacturers' accounts so as to stop the waste heretofore caused by the mechanical inefficiency of the more backward firms; of the present salutary publicity of manufacturing processes and expenses thereby insured; and, on the information thus obtained (in order never again to revert to the old-time profiteering) of the present rigid fixing, for standardized products, of maximum prices at the factory, at the warehouse of the wholesale trader, and in the retail shop. This question of the retail prices of household commodities is emphatically the most practical of all political issues to the woman elector. The male politicians have too long neglected the grievances of the small household, which is the prey of every profiteering combination; and neither the Liberal nor the Conservative Party promises in this respect any amendment. This, too, is in no sense a "class" measure. It is, so the Labor Party holds, just as much the function of government and just as necessary a part of the democratic regulation of industry to safeguard the interests of the community as a whole and those of all grades and sections of private consumers in the matter of prices as it is, by the factory and trade boards acts, to protect the rights of the wage-earning producers in the matter of wages, hours of labor, and sanitation.

A REVOLUTION IN NATIONAL FINANCE.

In taxation, also, the interests of the professional and housekeeping classes are at one with those of the manual workers. Too long has our national finance been regulated, contrary to the teaching of political economy, according to the wishes of the possessing classes and the profits of the financiers. The colossal expenditure involved in the present war (of which, against the protest of the Labor Party,

only a quarter has been raised by taxation, whilst three-quarters have been borrowed at onerous rates of interest, to be a burden on the nation's future) brings things to a crisis. When peace comes, capital will be needed for all sorts of social enterprises, and the resources of Government will necessarily have to be vastly greater than they were before the war. Meanwhile innumerable new private fortunes are being heaped up by those who have taken advantage of the nation's needs; and the one-tenth of the population which owns nine-tenths of the riches of the United Kingdom, far from being made poorer, will find itself, in the aggregate, as a result of the war, drawing in rent and interest and dividends a larger nominal income than ever before. Such a position demands a revolution in national finance. How are we to discharge a public debt that may well reach the almost incredible figure of 7,000 million pounds sterling and at the same time raise an annual revenue which, for local as well as central government, must probably reach 1,000 millions a year? It is over this problem of taxation that the various political parties will be found to be most sharply divided.

The Labor Party stands for such a system of taxation as will yield all the necessary revenue to the Government without encroaching on the prescribed national minimum standard of life of any family whatsoever; without hampering production or discouraging any useful personal effort, and with the nearest possible approximation to equality of sacrifice. We definitely repudiate all proposals for a protective tariff, in whatever specious guise they may be cloaked, as a device for burdening the consumer with unnecessarily enhanced prices, to the profit of the capitalist employer or landed proprietor, who avowedly expects his profit or rent to be increased thereby. We shall strenuously oppose any taxation, of whatever kind, which would increase the price of food or of any other necessary of life. We hold that indirect taxation on commodities, whether by customs or excise, should be strictly limited to luxuries, and concentrated principally on those of which it is socially desirable that the consumption should be actually discouraged. We are at one with the manufacturer, the farmer, and the trader in objecting to taxes interfering with production or commerce, or hampering transport and communications. In all these matters—once more in contrast with the other political parties, and by no means in the interests of the wage earners alone—the Labor Party demands that the very definite teachings of economic science should no longer be disregarded.

For the raising of the greater part of the revenue now required the Labor Party looks to the direct taxation of the incomes above the necessary cost of family maintenance; and for the requisite effort to pay off the national debt, to the direct taxation of private fortunes, both

during life and at death. The income tax and super tax ought at once to be thoroughly reformed in assessment and collection, in abatements and allowances and in graduation and differentiation, so as to levy the required total sum in such a way as to make the real sacrifice of all the taxpayers as nearly as possible equal. This would involve assessment by families instead of by individual persons so that the burden is alleviated in proportion to the number of persons to be maintained. It would involve the raising of the present unduly low minimum income assessable to the tax and the lightening of the present unfair burden on the great mass of professional and small trading classes by a new scale of graduation, rising from a penny in the pound on the smallest assessable income up to 16 or even 19 shillings in the pound on the highest income of the millionaires. It would involve bringing into assessment the numerous windfalls of profit that now escape, and a further differentiation between essentially different kinds of income. The excess profits tax might well be retained in an appropriate form; whilst so long as mining royalties exist the mineral rights duty ought to be increased. The steadily rising unearned increment of urban and mineral land ought, by an appropriate direct taxation of land values, to be wholly brought into the public exchequer. At the same time, for the service and redemption of the national debt, the death duties ought to be regraduated, much more strictly collected, and greatly increased. In this matter we need, in fact, completely to reverse our point of view and to rearrange the whole taxation of inheritance from the standpoint of asking what is the maximum amount that any rich man should be permitted at death to divert by his will from the national exchequer, which should normally be the heir to all private riches in excess of a quite moderate amount by way of family provision. But all this will not suffice. It will be imperative at the earliest possible moment to free the nation from at any rate the greater part of its new load of interest-bearing debt for loans which ought to have been levied as taxation; and the Labor Party stands for a special capital levy to pay off, if not the whole, a very substantial part of the entire national debt—a capital levy chargeable like the death duties on all property, but (in order to secure approximate equality of sacrifice) with exemption of the smallest savings, and for the rest at rates very steeply graduated, so as to take only a small contribution from the little people and a very much larger percentage from the millionaires.

Over this issue of how the financial burden of the war is to be borne and how the necessary revenue is to be raised, the greatest political battles will be fought. In this matter the Labor Party claims the support of four-fifths of the whole nation, for the interests

of the clerk, the teacher, the doctor, the minister of religion, the average retail shopkeeper and trader, and all the mass of those living on small incomes are identical with those of the artisan. The landlords, the financial magnates, the possessors of great fortunes will not, as a class, willingly forego the relative immunity that they have hitherto enjoyed. The present unfair subjection of the cooperative society to an excess profits tax on the "profits" which it has never made—specially dangerous as "the thin end of the wedge" of penal taxation of this laudable form of democratic enterprise—will not be abandoned without a struggle. Every possible effort will be made to juggle with the taxes so as to place upon the shoulders of the mass of laboring folk and upon the struggling households of the professional men and small traders (as was done after every previous war)—whether by customs or excise duties, by industrial monopolies, by unnecessarily high rates of postage and railway fares, or by a thousand and one other ingenious devices—an unfair share of the national burden. Against these efforts the Labor Party will take the firmest stand.

THE SURPLUS FOR THE COMMON GOOD.

In the disposal of the surplus above the standard of life society has hitherto gone as far wrong as in its neglect to secure the necessary basis of any genuine industrial efficiency or decent social order. We have allowed the riches of our mines, the rental value of the lands superior to the margin of cultivation, the extra profits of the fortunate capitalists, even the material outcome of scientific discoveries—which ought by now to have made this Britain of ours immune from class poverty or from any widespread destitution—to be absorbed by individual proprietors; and then devoted very largely to the senseless luxury of an idle rich class. Against this misappropriation of the wealth of the community, the Labor Party—speaking in the interests not of the wage-earners alone, but of every grade and section of producers by hand or by brain, not to mention also those of the generations that are to succeed us, and of the permanent welfare of the community—emphatically protests. One main pillar of the house that the Labor Party intends to build is the future appropriation of the surplus, not to the enlargement of any individual fortune, but to the common good. It is from this constantly arising surplus (to be secured, on the one hand, by nationalization and municipalization and, on the other, by the steeply graduated taxation of private income and riches) that will have to be found the new capital which the community day by day needs for the perpetual improvement and increase of its various enterprises, for which we shall decline to be dependent on the usury-exacting financiers. It is from the same source that has to be defrayed the public provision for the sick and

infirm of all kinds (including that for maternity and infancy) which is still so scandalously insufficient; for the aged and those prematurely incapacitated by accident or disease, now in many ways so imperfectly cared for; for the education alike of children, of adolescents and of adults, in which the Labor Party demands a genuine equality of opportunity, overcoming all differences of material circumstances; and for the organization of public improvements of all kinds, including the brightening of the lives of those now condemned to almost ceaseless toil, and a great development of the means of recreation. From the same source must come the greatly increased public provision that the Labor Party will insist on being made for scientific investigation and original research, in every branch of knowledge, not to say also for the promotion of music, literature and fine art, which have been under capitalism so greatly neglected, and upon which, so the Labor Party holds, any real development of civilization fundamentally depends. Society, like the individual, does not live by bread alone—does not exist only for perpetual wealth production. It is in the proposal for this appropriation of every surplus for the common good—in the vision of its resolute use for the building up of the community as a whole instead of for the magnification of individual fortunes—that the Labor Party, as the party of the producers by hand or by brain, most distinctively marks itself off from the older political parties, standing, as these do, essentially for the maintenance, unimpaired, of the perpetual private mortgage upon the annual product of the nation that is involved in the individual ownership of land and capital.

THE STREET OF TO-MORROW.

The house which the Labor Party intends to build, the four pillars of which have now been described, does not stand alone in the world. Where will it be in the street of to-morrow? If we repudiate, on the one hand, the imperialism that seeks to dominate other races, or to impose our own will on other parts of the British Empire, so we disclaim equally any conception of a selfish and insular "nonintervention-ionism," unregarding of our special obligations to our fellow citizens overseas; of the corporate duties of one nation to another; of the moral claims upon us of the nonadult races, and of our own indebtedness to the world of which we are part. We look for an ever-increasing intercourse, a constantly developing exchange of commodities, a steadily growing mutual understanding, and a continually expanding friendly cooperation among all the peoples of the world. With regard to that great commonwealth of all races, all colors, all religions, and all degrees of civilization, that we call the British Empire, the Labor Party stands for its maintenance and its progressive development on the lines of local autonomy and "Home Rule All

Round"; the fullest respect for the rights of each people, whatever its color, to all the democratic self-government of which it is capable, and to the proceeds of its own toil upon the resources of its own territorial home; and the closest possible cooperation among all the various members of what has become essentially not an empire in the old sense, but a Britannic alliance. We desire to maintain the most intimate relations with the Labor parties overseas. Like them, we have no sympathy with the projects of "imperial federation," in so far as these imply the subjection to a common imperial legislature wielding coercive power (including dangerous facilities for coercive imperial taxation and for enforced military service), either of the existing self-governing dominions, whose autonomy would be thereby invaded; or of the United Kingdom, whose freedom of democratic self-development would be thereby hampered; or of India and the colonial dependencies, which would thereby run the risk of being further exploited for the benefit of a "white empire." We do not intend, by any such "imperial senate," either to bring the plutocracy of Canada and South Africa to the aid of the British aristocracy, or to enable the landlords and financiers of the mother country to unite in controlling the growing popular democracies overseas. The absolute autonomy of each self-governing part of the Empire must be maintained intact. What we look for, besides a constant progress in democratic self-government of every part of the Britannic alliance, and especially in India, is a continuous participation of the ministers of the dominions, of India, and eventually of other dependencies (perhaps by means of their own ministers specially resident in London for this purpose) in the most confidential deliberations of the cabinet, so far as foreign policy and imperial affairs are concerned; and the annual assembly of an imperial council, representing all constituents of the Britannic alliance and all parties in their local legislatures, which should discuss all matters of common interest, but only in order to make recommendations for the simultaneous consideration of the various autonomous local legislatures of what should increasingly take the constitutional form of an alliance of free nations. And we carry the idea further. As regards our relations to foreign countries, we disavow and disclaim any desire or intention to dispossess or to impoverish any other state or nation. We seek no increase of territory. We disclaim all idea of "economic war." We ourselves object to all protective customs tariffs; but we hold that each nation must be left free to do what it thinks best for its own economic development, without thought of injuring others. We believe that nations are in no way damaged by each other's economic prosperity or commercial progress; but, on the contrary, that they are actually themselves mutually enriched thereby. We would

therefore put an end to the old entanglements and mystifications of secret diplomacy and the formation of leagues against leagues. We stand for the immediate establishment, actually as a part of the treaty of peace with which the present war will end, of a universal league or society of nations, a supernational authority, with an international high court to try all justiciable issues between nations; an international legislature to enact such common laws as can be mutually agreed upon, and an international council of mediation to endeavor to settle without ultimate conflict even those disputes which are not justiciable. We would have all the nations of the world most solemnly undertake and promise to make common cause against any one of them that broke away from this fundamental agreement. The world has suffered too much from war for the Labor Party to have any other policy than that of lasting peace.

MORE LIGHT—BUT ALSO MORE WARMTH.

The Labor Party is far from assuming that it possesses a key to open all locks; or that any policy which it can formulate will solve all the problems that beset us. But we deem it important to ourselves as well as to those who may, on the one hand, wish to join the party, or, on the other, to take up arms against it, to make quite clear and definite our aim and purpose. The Labor Party wants that aim and purpose, as set forth in the preceding pages, with all its might. It calls for more warmth in politics, for much less apathetic acquiescence in the miseries that exist, for none of the cynicism that saps the life of leisure. On the other hand, the Labor Party has no belief in any of the problems of the world being solved by good will alone. Good will without knowledge is warmth without light. Especially in all the complexities of politics, in the still undeveloped science of society, the Labor Party stands for increased study, for the scientific investigation of each succeeding problem, for the deliberate organization of research, and for a much more rapid dissemination among the whole people of all the science that exists. And it is perhaps specially the Labor party that has the duty of placing this advancement of science in the forefront of its political program. What the Labor Party stands for in all fields of life is, essentially, democratic cooperation; and cooperation involves a common purpose which can be agreed to; a common plan which can be explained and discussed, and such a measure of success in the adaptation of means to ends as will insure a common satisfaction. An autocratic sultan may govern without science if his whim is law. A plutocratic party may choose to ignore science, if it is heedless whether its pretended solutions of social problems that may win political triumphs ultimately succeed or fail. But no Labor Party can hope to maintain its position unless

its proposals are, in fact, the outcome of the best political science of its time; or to fulfill its purpose unless that science is continually wresting new fields from human ignorance. Hence, although the purpose of the Labor Party must, by the law of its being, remain for all time unchanged, its policy and its program will, we hope, undergo a perpetual development as knowledge grows and as new phases of the social problem present themselves in a continually finer adjustment of our measures to our ends. If law is the mother of freedom, science, to the Labor Party, must be the parent of law.

RECONSTRUCTION PROGRAM OF GERMAN TRADE-UNIONS.[1]

The following reconstruction scheme has been drawn up by the German trade-union organizations and federations of private salaried employees and was submitted in the form of a petition to the Federal Council (*Bundesrat*) and the Reichstag. The demands contained therein are grouped under seven headings: General economic measures, food supply, employment offices, discharge of soldiers and persons in the auxiliary service, regulation of working conditions and protective labor legislation, aid for soldiers and their dependents, and housing. The original petition contains lengthy reasons for each of the demands made which, owing to lack of space, can not be reproduced here. The demands proper are as follows:

GENERAL ECONOMIC MEASURES.

1. Representatives of the trade-union groups and of the joint committees of the salaried employees' federations of the most important branches of industry and trades shall be appointed to cooperate with the imperial commissioner for industrial reconstruction (*Reichs-Kommissar für Übergangswirtschaft*) and the economic committee of the imperial ministry of the interior. The advisory board of the imperial commissioner shall likewise be supplemented by the appointment of representatives of these organizations.

2. Until the return of normal economic conditions the whole of the imports and exports shall be controlled by the commissioner. Particular care shall be taken at the conclusion of peace that Germany obtains a sufficient number of counterclaims to cover her own requirements. Further, encouragement must be given to the export of such products as are not absolutely required for use at home.

3. Import permits shall be made dependent upon the approval of the imperial commissioner. Where the right of approving imports and exports has been placed in the hands of special organizations these shall be placed under the permanent control of the commissioner. Representatives of the workmen and salaried employees of industry and trade groups concerned shall participate in this control. In making purchases these organizations must do away with mutual competition of their purchasing agents and see to it that contracts are concluded under the most favorable conditions. The profits of these organizations shall not exceed a moderate return on the invested capital. Concealment of profits must be prevented. Their business transactions must be subject to public control. Organizations of the kind designated

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 27, No. 42. Berlin, Oct. 20, 1917.

here are to continue in existence only so long as is necessary for the restoration of normal economic conditions in the country.

4. The export of products of which there is a scarcity in the home market may be made dependent on the approval of the imperial commissioner.

5. German shipping concerns, whether for sea or inland navigations, must submit to the orders of the commissioner, whose approval shall be particularly required for the fixing of rates and routes and for the disposal of cargo space. In the matter of space preference shall be given to raw materials and foodstuffs which are urgently required.

6. The extension of the inland waterways shall be taken in hand at once and be carried out by the Government according to uniform principles. The administration and operation of these waterways shall likewise be subject to the supervision of an imperial office.

7. The war companies founded for the supply of the various industries shall distribute the raw materials and partly manufactured goods according to the capacity and requirements of the individual establishments. This applies equally to goods imported from abroad and to those produced at home. The scheme of distribution is to be submitted for approval to the commissioner.

8. For the facilitation of the solution of the economic problems of the period of transition, for the collecting of data on economic conditions, and for the receiving and disposal of complaints, requests, and applications the imperial commissioner shall establish in the various Federal States and in Prussia for each district of each Province special economic boards (*Wirtschaftsämter*) composed of an equal number of representatives of employers, employees, and of the competent State government and presided over by a chairman appointed by the imperial commissioner.

9. In order to initiate and promote economic activity the Imperial and the Federal governments, as well as the provincial, district, and communal authorities, should lose no time in determining on, approving, and carrying out the public purchases and works that come within their scope. In the first place such purchases and works shall be accelerated which are of importance for the revival of economic activity, for the improvement of the food supply, and for the increase of housing accommodations.

10. The commissioner shall exercise control over all economic syndicates which aim at regulating production, markets, conditions of delivery, prices, and imports and exports. He may prohibit measures of the syndicates which may hamper the transition from war to peace conditions.

FOOD SUPPLY.

1. Until normal conditions have been reestablished it will be necessary to retain for the purposes of the food supply the present war kitchen and mass-feeding arrangements, the Government control of the most important foodstuffs, maximum prices, requisitioning and rationing, and penalties against profiteering. Prices and distribution must be arranged in such a manner as to secure to the masses of the population a cheap and adequate supply of food.

2. In the interest of an advantageous and well regulated food supply it will be advisable to retain the imperial grain office, the central purchasing association, and those companies connected with it which play an indispensable part in procuring foodstuffs.

3. The embargo on food exports must for the present remain in force until the market is sufficiently well stocked to permit the removal of restraints upon trade.

4. The importation of cattle, foodstuffs, and fodder must be encouraged in the same manner as during the war.

5. The production of foodstuffs must be actively promoted and facilities must be granted for the acquisition and employment under cooperative management of machinery and appliances and for the procuring of fertilizers, seed, and fodder.

6. All discrimination against cooperative societies and stores must be prohibited; nor must Government or communal employees be hindered from acquiring membership in them.

EMPLOYMENT OFFICES.

1. The procuring of employment must be regulated uniformly for the whole Empire by law. It must be effected free of charge and be based on equal representation of employers and employees in the administration of employment offices.

2. The organization of the employment offices must embrace all occupational groups. The employment offices for private salaried employees are to be arranged in three groups: For mercantile, technical, and office employees. A labor office (*Arbeitsamt*) shall be established for every large town, with its suburbs, and for each rural district. To this labor office shall be subordinated the various employment offices within its district. The individual labor offices within specified territorial districts shall be combined into federations (district labor offices), and an imperial labor office (*Reichsarbeitsamt*) shall be the central authority in this organization of the employment offices.

3. Until legislation is enacted to this effect, all employment offices not conducted for profit shall be grouped together by districts under central information offices (*Zentralauskunftsstellen*), and an imperial central office (*Reichsstelle*) with jurisdiction over all employment offices shall regulate the relations of the central information offices to each other.

Vacancies shall be reported to a general employment office or to an employment office for the particular occupation in question. Employment offices operated for profit shall, like free employment offices, be under obligation to report to the central information office the number of vacancies and applications for employment filed with them. The filling of vacancies shall not imply exemption from the obligation to report them. The central information offices shall effect the balancing of supply and demand in the labor market within their district.

The imperial labor office shall effect the balancing of supply and demand between the individual central information offices and issue regulations for the conduct of employment offices during the transition period.

4. Special postal, telegraph, and telephone facilities shall be granted to the employment offices for communication with one another and with the central information offices. The central information offices shall be authorized to grant free transportation to their place of employment to soldiers and persons in the auxiliary service on their discharge.

5. The engagement of alien male and female labor shall be prohibited, except where a shortage of native labor can be proved to exist. Whether alien labor may be engaged shall be decided by the central information offices after a hearing of employers' and workmen's economic organizations. These offices shall also determine measures for the prevention of depression of wages through the introduction of alien labor. The imperial labor office shall regulate the principles by which the admission of alien labor shall be governed during the transition period. Alien workmen shall receive the same wages and be guaranteed the same rights as native workmen.

DISCHARGE OF SOLDIERS AND OF PERSONS IN THE AUXILIARY SERVICE.

1. The discharge of soldiers from military service is to be so regulated as to secure the immediate release of business men, technical experts, foremen, skilled workmen, and administrative officials who are urgently required for the restoration of normal economic activity and for the resumption of operation of indispensable establishments. In releasing soldiers preference should be given to those trained for an occupation in which there is a particularly strong demand for labor. Discharge in general should be effected with as little delay as possible. Congestion of the labor market

should be no reason for detaining the soldiers longer in military service than is necessary for military reasons.

2. The discharged soldier shall be conveyed free of charge to the place of residence of his family, or to his place of employment, if he can show that he has obtained work.

3. The military authorities shall do all in their power to assist the enlisted men in obtaining suitable employment, especially by directing them to the proper employment office, by giving them information, and by assisting them in their correspondence.

4. Reemployment in the establishment in which they were employed before the outbreak of the war should as far as possible be assured to those soldiers who have to support a family, provided that they have been employed in the establishment at least one year before being called in for war service. Whether it is possible in individual cases for the owner of the establishment to comply with this obligation shall be decided by an equipartisan arbitration board. Soldiers and auxiliary service men who are unable or unwilling to continue their membership in an establishment pension fund under the same conditions as formerly must be permitted to retain the rights they have acquired on payment of a moderate fee.

5. Workmen and salaried employees who have been discharged from military service and can not be assigned to suitable employment shall receive unemployment allowances. Until State unemployment insurance shall have been introduced, the outlay made by the communes on this account is to be refunded to them by the Imperial Government.

6. For the purpose of recuperating and of attending to their domestic and business affairs, soldiers on their discharge from the Army shall be regarded as on leave for a full month, and shall draw pay at their former rate. Likewise shall dependents of discharged soldiers continue to receive for a full month their former State or communal family subsidy, irrespective of the fact that the discharged men have obtained employment, and for a still further period if they are unemployed.

7. Soldiers whose health has been seriously impaired and who are to be discharged from the army must be granted sufficient leave for recuperating, and, if necessary, must be enabled to take a rest or a course of treatment in a health resort or a sanatorium at the expense of the Empire. The same privilege must be accorded to those interned abroad on their return home.

8. Employers who, as a rule, employ not less than 20 workmen shall be required to find suitable employment in their establishment for at least one disabled soldier to every 20 workmen. Exceptions to this rule shall only be allowed by the equipartisan arbitration board after a hearing of the wages board concerned.

9. Disabled soldiers who before being called into military service were employed in Government or communal establishments shall be reinstated irrespective of the number of workmen or employees engaged there.

10. The wages of disabled soldiers in private as well as in State and communal establishments must be computed with consideration of the actual work performed by them; in particular they must receive the same wages for piecework as able-bodied workers. In no circumstances must pensions be taken into account in computing earnings.

11. The employment conditions created by the national auxiliary service law shall be voided soon after the termination of the war in such measure as the restoration of normal economic activity requires. Workmen or employees who gave up positions to take up auxiliary service work shall, on being discharged from such work, be entitled to unemployment allowances until they secure employment.

12. Male and female workers and salaried employees who have to be discharged in order to make possible the reinstatement of ex-soldiers shall also receive unemployment allowances unless they are assigned to some other employment.

REGULATION OF WORKING CONDITIONS AND PROTECTIVE LEGISLATION.

1. In view of the unsettled conditions that may prevail during the transition period, unemployment allowances are to be granted from Imperial funds, so long as national unemployment insurance has not been introduced.

2. The state of affairs created by Federal decree, whereby income from earnings has been made exempt from attachment to a larger extent than provided in article 4, paragraph 4, of the law on attachment of wages, shall be maintained. Article 850, paragraph 2, of the law on civil procedure shall be made applicable to wages and salaries of workmen and employees as well as to pensions and survivors' pensions of persons employed on the basis of private contract, in so far as these wages or salaries do not exceed 5,000 marks ($1,190) per annum.

3. Provisions of protective labor legislation which have been temporarily suspended during the war must be restored to full effectiveness immediately on the conclusion of peace. The prohibition of night work in bakeries and confectioneries decreed by the Federal council, as well as the 7 o'clock closing order for shops other than those selling foodstuffs, shall be retained. Where the hours of labor have been lengthened in imperial, State, or communal establishments they must be reduced to the prewar time basis.

4. With the exception of the sickness insurance for homeworkers, which must be newly regulated, the provision of the workmen's insurance laws which have been temporarily suspended during the war must be put in force again immediately on the conclusion of peace.

5. The Federal decree relating to maternity benefits shall remain in force during the transition period, and steps are to be taken to incorporate its provisions in the Imperial Workmen's Insurance Code.

6. For adjusting wage disputes and labor differences which can not be settled by the authorities designated in collective agreements, official equipartisan arbitration boards shall be created in the individual Federal States and Provinces and an equipartisan national arbitration board shall be created in the imperial commission for industrial reconstruction for the adjustment of disputes relating to a national collective wage agreement.

7. The workmen's and salaried employees' committees, and arbitration boards created through the law on the national auxiliary service, are to be retained during the period of reconstruction and in normal times in such a manner that boards corresponding to the local arbitration board shall be created in each urban or rural district, and boards corresponding to those maintained in the district of each army corps shall be created for the district of each Province or Federal State. The military chairmen of these boards shall be replaced by officials of the factory inspection service, and the commissioner for industrial reconstruction shall assume the functions of the war office (*Kriegsamt*). In localities in which an industrial or mining arbitration court exists this may, with the consent of both parties, also be appealed to as an arbitration board.

8. The workmen's and salaried employees' committees shall examine requests, wishes, and complaints of the workers of their establishments in regard to wage and working conditions and in submitting them to the employer shall express their opinion on the question involved.

The arbitration boards shall decide disputes which can not be settled through discussion between the workmen's committee and the employer, by making an award. The parties to the dispute shall be bound to appear before the arbitration board when called upon. The arbitration board shall give an award, even if one of the parties remains away from the arbitration proceedings. The parties to the dispute must declare within a certain time limit whether they accept the award.

9. Workmen and salaried employees shall by imperial law be granted recognized representation in the form of chambers organized on an occupational basis.

10. Agreements made by joint committees of employers and workmen's or salaried employees' organizations with the object of furnishing employment or providing for disabled soldiers shall be transmitted to the commissioner. Every effort should be made to give effect to these agreements.

11. Trade boards so far created for home workers shall be retained and others shall be established for those trades in which they are yet lacking. They shall be authorized to regulate wage and working conditions in a legally binding manner.

12. When orders are given for work to be done at home in behalf of the Empire, States, or communes, the wages therefor shall, after consultation with the trade organizations of employers and workmen, be determined in such a manner that the share of the workers and subcontractors is clearly defined and may not be reduced by subsequent agreements. The commissioner shall be authorized to give binding force to these wage agreements for home workers. Where no special wage or arbitration board exist disputes are to be settled by the arbitration board of the particular urban or rural district.

AID FOR SOLDIERS AND THEIR DEPENDENTS.

1. Public loan banks shall be established for the assistance of soldiers who have fallen into financial difficulties. These banks shall grant loans at moderate interest and on easy terms of repayment. The requisite funds shall be provided by the Imperial Government.

2. The protection of debtors, inaugurated during the war, shall be retained and extended during the period of reconstruction. A special law shall be enacted which shall determine how the concessions allowed are to be redeemed.

3. The rent arbitration boards shall be retained. Where disputes arise regarding accumulated arrears of rent, the boards shall strive to effect a compromise between the parties, and where these efforts prove unavailing they shall with due consideration of the income and financial situation of the debtor pronounce their own award, which shall be legally binding. Whatever facilities it shall be possible to grant in the way of recourse to the loan banks, payment by installments, postponement of payment, and remission of part of the debt by the landlord, or assumption of it by the commune, State, or Empire, shall be duly considered in the award.

HOUSING.

1. The erection of small dwellings shall be promoted through participation by the State and communes in the capital stock of public welfare building associations, through the sale of fiscal or communal land at moderate terms, or through the leasing in the form of hereditary building rights to such associations, through the granting of mortgage loans at moderate interest and easy refunding terms by insurance institutes and State and communal savings banks, or through the guaranty by the State of mortgage loans made by third parties.

2. The communes shall see to it that the building land at present lying idle, whether privately or publicly owned, shall be opened up as soon as possible; they should make the reduction of improvement taxes and other real estate taxes and the promotion of the erection of small dwellings part of their program, and they should also erect dwellings on their own account.

3. The settlement on the land of disabled soldiers who are familiar with and capable of agricultural labor shall be promoted through creation of suitable State, communal, and corporate organizations and through subsidies to welfare associations which devote themselves to this task. Home colonization, a matter of very urgent necessity, shall be promoted by the fixing of low fares for local and suburban traffic.

4. House owners shall be granted concessions in the matter of payments of mortgage interest which have fallen into arrears during the War through no fault of their own. In order to clear off such arrears the mortgage arbitration board shall with due consideration of the income and financial situation of the debtor endeavor to induce the creditor to accept payment by installments or to remit part of the debt, or where necessary it should pronounce its own award.

Security for mortgages on real estate shall be provided up to a certain limit from State funds.

GOVERNMENTAL CONTROL OF LABOR IN GERMANY.

Various articles in preceding numbers of the MONTHLY REVIEW[1] have traced the experience of the British Government in its efforts to mobilize the labor force of the country for the needs of the war. In practice these efforts have rarely involved a resort to compulsion of any sort, the most important attempt at compulsory control being the leaving-certificate provision of the Munitions of War Act of 1915. The amended act of 1916 greatly modified the stringency of this clause, and the whole scheme of leaving certificates was repealed in October, 1917.

Until very recently the Bureau of Labor Statistics has had no accurate information regarding the manner in which the German Government was exercising control over civil labor. A copy of the German law upon this subject, however, has now been received, and a translation thereof is submitted below, together with the administrative orders accompanying it. The law is entitled "Gesetz über den Vaterländischen Hilfsdienst." Its purpose is to mobilize civil labor for war production purposes. To this end it places very great restrictions upon the freedom of labor movement and action, and gives the military authorities a very important control over the whole labor situation.

TEXT OF THE NATIONAL AUXILIARY SERVICE LAW, AND REGULATIONS AND ORDERS RELATING TO IT.

The National Auxiliary Service Law of December 5, 1916 (R. G. B. 1, 1916, No. 276).[2]

ARTICLE 1. Every male German citizen from the completed seventeenth to the completed sixtieth year of age who is not in service with the armed forces is subject to national auxiliary service for the duration of the war.

ART. 2. As active in the national auxiliary service are to be considered all persons employed by public authorities, in public institutions or establishments, war industries, agriculture and forestry, in nursing of the sick, economic war organizations of all kinds or in other occupations or establishments which are of direct or indirect importance for the conduct of the war or the supply of the nation, in so far as the number of these persons does not exceed requirements.

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[1] See, particularly, MONTHLY REVIEW, June, 1917, Labor in war time in Great Britain; September, 1917, Restrictions upon the freedom of labor movement in Great Britain during the war; December, 1917, Abolition of leaving certificates in Great Britain.

[2] Bulletin des Internationalen Arbeitsamtes, vol. 16, Nos. 8-9. Jena. 1917.

Persons subject to auxiliary service who before August 1, 1916, were employed in agriculture or forestry may not be withdrawn from this occupation for the purpose of assignment to another occupation in the national auxiliary service.

ART. 3. The War Office (*Kriegsamt*) created in the Prussian War Ministry is charged with the direction of the national auxiliary service.

ART. 4. The question whether and to what extent the number of persons employed by a public authority exceeds requirements is to be decided by the competent Imperial or State central authorities in agreement with the War Office. The question as to what are to be considered public institutions or establishments, and as to whether and to what extent the number of persons employed therein exceeds requirements is to be decided by the War Office after consultation of the competent Imperial or State central authorities.

In all other instances the question, whether an occupation or establishment is of importance in the meaning of article 2, as well as whether and to what extent the number of persons employed in an occupation, organization, or establishment exceeds requirements shall be decided by boards which shall be created for the district of each general command or for parts of the district.

ART. 5. Each board (art. 4, par. 2) shall be composed of one officer as chairman, two higher State officials, one of whom shall be from the factory inspection service, and two employers' and two workmen's representatives. The officer, as well as the employers' and workmen's representatives, is to be appointed by the War Office; in Bavaria, Saxony, and Wurttemberg these members are to be appointed by the war ministry, which, conjointly with the War Office, is in general charged with the enforcement of the law in these Federal States. The higher State officials are to be appointed by the central State authorities or by authorities designated by the latter. If the district of a general command includes territories of several Federal States the higher officials shall be appointed by the competent authorities of these Federal States; the officials of that Federal State in which the establishment, the organization, or the person exercising an occupation are located shall participate in the decisions of the board.

ART. 6. Decisions of the board (art. 4, par. 2) may be appealed to a board of appeals (*Zentralstelle*) which shall be created in the War Office and shall be composed of two officers of the War Office, one of whom shall act as chairman, two officials appointed by the imperial chancellor, one official appointed by the central authorities of the Federal State in which the establishment, organization, or the person exercising an occupation is located, as well as of one employers' and one workmen's representative. The second sentence of article 5 is applicable to the appointment of these representatives. If the decision relates to matters of interest to the navy one of the officers shall be appointed by the Imperial Navy Office. In appeals against decisions of boards located in Bavaria, Saxony, or Wurttemberg, one of the officers shall be appointed by the war ministry of the Federal State interested.

ART. 7. Persons subject to auxiliary service who are not employed within the meaning of article 2 may at any time be requisitioned for national auxiliary service.

As a rule the requisitioning is at first to be effected through a request for voluntary registration issued by the War Office or an authority designated by the central State authorities. If this request is not complied with in a sufficient measure each individual person subject to auxiliary service shall be requisitioned by special summons, in writing, of a board to be formed for each district of a military reserves commission (*Ersatzkommission*) and to be composed of an officer as chairman, one higher official, and two employers' and two workmen's representatives. In case of equality of votes the chairman has the deciding vote. Sentence two of article 5 is applicable for the appointment of the officer and of the employers' and workmen's representatives; the higher official is to be appointed by the central State authorities or by an authority designated by the latter.

Each person who has received such a special summons in writing shall seek employment in an occupation coming within the meaning of article 2. In so far as such employment is not obtained by the person in question within two weeks after receipt of the summons he shall be assigned to an employment by the board.

Appeals against the assignment to an employment shall be decided by the board created at the general command (art. 4, par. 2). Appeals have no staying effect.

ART. 8. In assigning a person subject to auxiliary service to an employment, his age, family conditions, place of residence, health, and former occupation shall be considered as much as possible; it shall also be investigated whether the prospective wages of the person assigned to an employment will be sufficient for his own sustenance and that of relatives supported by him.

ART. 9. No person shall give employment to a person subject to auxiliary service who is employed or has been employed within the last two weeks in any of the occupations designated in article 2 unless the person subject to auxiliary service produces a certificate from his last employer showing that he left his employment with the consent of the employer.

If an employer refuses to issue a leaving certificate requested by a person subject to auxiliary service, the latter may appeal to a board to be formed for each district of a military reserves commission and to be composed of a representative of the War Office as chairman and of three employers' and three workmen's representatives. Two of the employers' and two of the workmen's representatives are to be appointed as permanent representatives, while the remaining representatives shall be appointed from that occupational group to which the appellant belongs. If after investigation of the case in question the board finds that the appellant had a valid reason for leaving his employment the board shall issue a certificate to him, which shall have the same effect as a certificate issued by the employer.

The possibility of obtaining a suitable improvement of working conditions within the national auxiliary service shall be considered a particularly valid reason.

ART. 10. The War Office shall issue regulations for the procedure of the boards designated in article 4, paragraph 2, article 7, paragraph 2, and article 9, paragraph 2.

For the appointment of employers' and workmen's representatives to the boards (arts. 5 and 6, art. 7, par. 2, and art. 9, par. 2) by the War Office the latter shall obtain from employers' and workmen's organizations lists proposing suitable representatives.

If for the performance of the tasks of the boards designated in article 9, paragraph 2, similar boards (war committees, etc.) are already in existence they may with the consent of the War Office take the place of these boards.

ART. 11. Permanent workmen's committees must be in existence in all establishments operated for the national auxiliary service to which Title VII of the Industrial Code is applicable and which as a rule employ at least 50 workmen.

In so far as permanent workmen's committees in accordance with article 134b of the Industrial Code or with the mining laws do not exist in such establishments they shall be formed. The members of these shall be elected by the workmen of the establishment or branch establishment who are of age, from their own midst, through direct secret ballot according to the principles of proportionate representation. The central State authorities shall issue detailed regulations relating thereto.

Special committees (salaried employees' committees) shall be formed according to the same principles and with the same rights in establishments of the kind designated in paragraph 1 which employ more than 50 salaried employees subject to salaried employees' insurance.

ART. 12. The workmen's committee is charged with the promotion of good-will among the working force and between the working force and the employer. It shall bring to the knowledge of the employer proposals, wishes, and complaints of the work-

ing force relating to the equipment, the wage and working conditions of the establishment, and its welfare institutions, and shall express its views on these matters.

On demand of at least one-fourth of the membership of a workmen's committee a meeting must be called and the question proposed for discussion be made the order of the day.

ART. 13. If in disputes as to wage or other working conditions arising in an establishment of the kind designated in article 11 an agreement between the employer and the workmen's committee can not be effected each of the two parties may invoke arbitration by the board designated in article 9, paragraph 2, provided both parties have not invoked arbitration by an industrial, mining, guild, or mercantile arbitration court. In such a case articles 66 and 68 to 73 of the law on industrial arbitration courts are applicable with the reservation that a decision shall also be rendered if one of the parties does not appear at the arbitration procedure or is not willing to arbitrate, and that persons who have taken part in the dispute as employers or workmen or as members of a workmen's committee may not participate in the rendering of a decision.

If in an establishment operated for the national auxiliary service to which Title VII of the Industrial Code is applicable a permanent workmen's committee created in pursuance of the Industrial Code, the mining laws, or of article 11, paragraphs 2 or 3 of this law does not exist the board designated in article 9, paragraph 2, may be invoked for the arbitration of disputes between the working force and the employer as to wage or other working conditions; the same is applicable to agricultural establishments. The provisions of the second sentence of paragraph 1 are correspondingly applicable.

If the employer does not submit to the decision, leaving certificates (art. 9) may be issued, on their request, to the workmen who took part in the dispute. If, on the other hand, the workmen do not submit to the decision, reasons based on the award may not serve as ground for the issuing of leaving certificates.

ART. 14. Persons employed in the national auxiliary service may not be restricted in the exercise of their legal right of association and of holding meetings.

ART. 15. The competent service authorities shall issue regulations in the meaning of articles 11 to 13 for the industrial establishments of the military and naval administration.

ART. 16. Workmen assigned to agriculture in pursuance of this law shall not be subject to State regulations on domestic service.

ART. 17. Information as to employment and labor questions and as to wage conditions and operation of establishments requested through public announcement or direct inquiry by the War Office or the boards must be furnished.

The War Office is authorized to inspect establishments through one of its representatives.

ART. 18. The following may be punished with imprisonment up to one year and a fine up to 10,000 marks [$2,380], or with either of them, or with detention in a jail:

(1) Whoever does not comply with an order assigning him to an occupation in pursuance of article 7, paragraph 3, of this law or without valid reason refuses to perform the work assigned to him.

(2) Whoever employs a workman in contravention of the provisions of article 9, paragraph 1.

(3) Whoever does not furnish within the fixed time limit the information provided for in article 17 or in giving such information knowingly makes untrue or incomplete statements.

ART. 19. The Federal Council shall issue the regulations required for the application of this law. General orders require the approval of a committee of 15 members elected by the Reichstag from among its own membership.

The War Office shall keep this committee currently informed on all important events, furnish it information on request, receive its proposals, and obtain the opinion of the committee before issuing important orders of a general nature.

The committee is authorized to convene during a recess of the Reichstag.

The Federal Council may provide imprisonment up to one year, or a fine up to 10,000 marks [$2,380], or either of them, or detention in a jail for contraventions of the regulations for the application of this law.

ART. 20. The law shall come into force with the date of its promulgation. The Federal Council shall determine the date of its abrogation; if it does not make use of this authorization within one month after the conclusion of peace with the powers of Europe the law shall cease to be in force.

Order of December 21, 1916, Relating to Transitory Provisions for the Application of Articles 9 and 10 of the National Auxiliary Service Law. (R. G. B. 1, p. 1410.)

In pursuance of article 19 of the law on the national auxiliary service, of December 5, 1916, the Federal Council, with the consent of the committee elected by the Reichstag, has issued the following order:

ARTICLE 1. Pending the organization of the boards provided in article 9, paragraph 2, of the law their duties shall be performed with equivalent effect by temporary boards organized by the general commands according to requirements; the observance of article 10, paragraph 2, of the law is not required.

ART. 2. If for the performance of the duties of the boards designated in article 9, paragraph 2, of the law similar boards (war committees, etc.) are already in existence they may, with the consent of the general commands (in Bavaria with that of the war ministry), take the place of the temporary boards.

ART. 3. The War Office shall issue regulations for the procedure of the temporary boards.

ART. 4. This order comes into force with the day of its promulgation and on February 1, 1917, shall cease to be in force.

Order of December 21, 1916, Relating to Regulations for the Application of the Law on the National Auxiliary Service.

In pursuance of article 19 of the law on the national auxiliary service, of December 5, 1916, the Federal Council, with the consent of the committee elected by the Reichstag, has issued the following order:

ARTICLE 1. The War Office shall organize the central board provided in article 6 of the law as well as the boards to be created in pursuance of article 4, paragraph 2, article 7, paragraph 2, and article 9, paragraph 2, of the law and determine the district of their jurisdiction and their location. In Bavaria, Saxony, and Wurttemberg the war ministry conjointly with the War Office shall organize the boards and determine the district of their jurisdiction and their location.

ART. 2. At least one alternate is to be appointed for the officers and officials in the central board and in the district boards; for the employers' and workmen's representatives in the central board and the district boards alternates are to be appointed according to requirements. The provisions of the law for the appointment of regular members are also applicable to the appointment of alternates.

ART. 3. Only German citizens who are of age may be appointed as employers' and workmen's representatives in the central board and in the district boards, or as their alternates.

The following are ineligible for appointment:

(1) One who, in consequence of a sentence by a criminal court, has lost the right to hold a public office or is being prosecuted for a crime or misdemeanor which may cause the loss of this right, provided he is being held for trial.

(2) One who by judicial order has been restricted in the disposal of his estate.

ART. 4. A person appointed in accordance with article 3 as employers' or workmen's representative or as alternate of such a representative may decline acceptance of the office only—

(1) If he has completed the sixtieth year of age;

(2) If he has more than four minor legitimate children; children adopted by some other person may not be counted;

(3) If he is prevented from orderly discharge of the office by sickness or infirmities;

(4) If he holds more than one guardianship or trusteeship. Guardianship or trusteeship over several sisters or brothers is to be considered as only one guardianship or trusteeship. Two joint guardianships are to be considered as equivalent to one guardianship.

ART. 5. Whoever without valid reason declines to accept the office of employers' or workmen's representative or of alternate for such a representative may be fined up to 500 marks [$119] by the chairman of the central board, if he has been appointed to this board, or otherwise by the chairman of the board to which he has been appointed.

Likewise whoever does not promptly attend the meetings or in other manner avoids discharge of his duties may be fined.

Appeals against such fines are finally decided by the War Office; in Bavaria, Saxony, and Wurttemberg by the war ministry.

ART. 6. Employers' and workmen's representatives in the central board and in the district boards shall hold their office as an honorary office without compensation.

They are to receive a per diem allowance of 15 marks [$3.57] and refund of necessary traveling expenses. In case of travel by rail they are entitled to refund of second-class fare, and of first-class fare in case of travel by boat.

ART. 7. Workmen's representatives must notify their employer of each convocation to a meeting of the central board or of a district board. In case of notification without culpable delay their absence from work does not furnish a valid reason for the employer to discontinue the service relation without the observance of the time limit for giving notice.

ART. 8. Employers and their salaried employees are prohibited from restricting workmen's representatives in the acceptance and discharge of the honorary office (article 6), or from discriminating against them on account of the acceptance or mode of discharge of the honorary office.

Employers or their salaried employees contravening against this provision may be punished with a fine up to 300 marks [$71.40] or with detention in jail.

ART. 9. The chairman and other members of the central board and of the district boards are obligated to observe official secrecy as to business, operation, and trade secrets which come to their knowledge in the discharge of their office.

Whoever in contravention of paragraph 1 without authorization divulges a secret shall be punished with a fine up to 3,000 marks [$714] or with imprisonment up to three months.

Whoever does so with the intention of injuring the owner of a business or establishment or a person exercising an occupation or of procuring a pecuniary advantage for himself or some other party, or whoever with like intent utilizes a secret of the kind designated in paragraph 1 shall be punished with imprisonment up to one year, or with a fine up to 10,000 marks [$2,380], or with either of them.

Prosecution shall take place only on demand.

ART. 10. Authorities and institutions of authorities are obligated to comply with requests made to them by the War Office, the central board, and the district boards in the application of the national auxiliary service law.

The same applies to requests made by the war ministries of Bavaria, Saxony, and Wurttemberg in the application of the law.

ART. 11. Before rendering a decision in pursuance of article 4, paragraph 2, of the law the board shall consult the communal authorities and, according to the nature of the case, also the competent official representatives of industry and commerce, of the handicrafts, of agriculture, or of other occupational classes. Trade associations and other unofficial economic associations may also be consulted in suitable cases. If the decision relates to naval interests, a naval officer or official shall on request of the Imperial Navy Office be consulted.

ART. 12. Fines imposed in pursuance of article 5 shall be collected like communal taxes. Appeals against fines act as a supersedeas. Legal notice must precede any action for enforced collection of the fine. The fee for the legal notice shall be determined by the War Office; in Bavaria, Saxony, and Wurttemberg by the war ministry, and be collected in the same manner as the fine.

All fines accrue to the Imperial treasury.

ART. 13. The order becomes effective on the day of its promulgation.

Order of the Federal Council of January 30, 1917, Relating to Regulations for the Application of the Law on the National Auxiliary Service.[1]

ARTICLE 1. If the service relation of a person subject to auxiliary service is discontinued by the employer or with his consent, the latter must issue to the former a leaving certificate.

ART. 2. If a person subject to auxiliary service to whom the issuance of a leaving certificate has been refused has failed to complain to the board in accordance with article 9, paragraph 2, of the law, he may nevertheless request written information from the board as to whether the establishment of his former employer or the organization by which he was employed are operated in the interest of the auxiliary service in the meaning of article 2 of the law. This information shall be given by the chairman of the board unless he has charged some one else with it.

If the information furnished states that the establishment of the former employer or the organization in which the person subject to auxiliary service was last employed is not operated in the meaning of article 2 of the law, the person subject to auxiliary service may be given other employment.

Such information does not prejudice a decision rendered in pursuance of article 4, paragraph 2, and article 6 of the law.

A copy of the information given must be transmitted to the former employer and to the competent local office of the War Office.

ART. 3. Every employer refusing the issuance of a leaving certificate requested by an employee subject to auxiliary service shall be obligated to continue him in employment at working conditions not less favorable than before.

ART. 4. A person subject to auxiliary service, who has availed himself of his right of appeal in pursuance of article 9, paragraph 2, of the law, must continue his service relation until his appeal has been decided, unless the circumstances of the case are such that he can not be expected to do so. The chairman of the board shall on request of the employer or employee decide whether such circumstances exist.

ART. 5. The leaving certificate must show the name or title of the employer or organization as well as the locality, street, and street number of the working place in which the person subject to auxiliary service was last employed and the duration of his last employment.

The leaving certificate must be issued on a separate sheet apart from other working papers of the person subject to auxiliary service.

On entrance into a new service relation the new employer must take up the leaving certificate of the person subject to auxiliary service.

[1] Correspondenzblatt der Generalkomission der Gewerkschaften Deutcshlands vol. 27, No. 7. Berlin, Feb. 17, 1917.

The provisions of paragraphs 1 to 3 are also applicable to certificates issued in pursuance of article 9, paragraph 2, of the law.

ART. 6. Certificates issued in pursuance of article 9 of the law and of article 1 of the present order are exempt from stamp taxes. The same is applicable to written information furnished in pursuance of article 2 of the present order.

ART. 7. The procedure before the central board of the War Office, before the district boards formed in pursuance of article 4, paragraph 2, article 7, paragraph 2, and article 9, paragraph 2, and before the chairman of these boards shall be free of fees or stamp taxes.

ART. 8. The provisions of the law on civil court procedure shall be applicable to the obligation of issuing a certificate or of rendering an opinion.

ART. 9. The chairman of the central board or of a district board may impose fines up to 100 marks [$23.80] on witnesses or experts who without sufficient reason fail to appear or do not appear in time or without legal excuse refuse to testify.

Likewise he may impose fines upon interested parties who without sufficient reason fail to appear or who do not appear in time at an oral hearing at which they were ordered to appear in person.

In appeals against the determination of fines imposed in pursuance of paragraphs 1 and 2 the decision of the central board or of the district board shall be final.

ART. 10. The central board and the district boards are authorized to request the local courts to examine witnesses and experts under oath.

ART. 11. A person subject to auxiliary service who after receipt of a special written order (art. 7, par. 2, sentence 2, of the law) has obtained employment in one of the occupations designated in article 2 of the law must immediately notify of this fact the board who issued the order and state the name of his employer and the nature of his employment. The employer must attest the correctness of these statements by his signature.

If the person subject to auxiliary service fails to notify the board, the chairman of the board may impose on him a fine up to 20 marks [$4.76], provided the special order gave notice of such fine.

The special order shall be accompanied by a printed form suitable for mailing, in which the notification prescribed in paragraph 1 may be filled in.

ART. 12. The provisions of article 12 of the order of December 21, 1916, relating to regulations for the application of the law on the national auxiliary service shall be applicable to the collection and disposal of fines imposed in pursuance of articles 9 and 11.

ART. 13. Employers and their representatives are prohibited to prevent workmen and employees subject to the law on insurance of salaried employees from exercising their right to vote in elections for workmen's or salaried employees' committees provided in article 11, paragraphs 2 and 3 of the law or to restrict them in the acceptance or exercise of the duties of membership in such a committee or to discriminate against them on account of the acceptance or mode of exercise of such membership duties.

Employers or their representatives who contravene against this provision may be punished with a fine up to 300 marks [$71.40] or with detention in a jail.

ART. 14. This order becomes effective on the day of its promulgation.

Order of the War Office of January 30, 1917, relating to regulations for the procedure of the boards created in pursuance of the auxiliary service law.[1]

The following regulations are issued in pursuance of article 10 of the law on the national auxiliary service of December 5, 1916 (R. G. B. 1, p. 1333):

ARTICLE 1. The competence of the boards shall be determined as follows:

1. In cases coming within the provisions of article 4, paragraph 2 of the law, that board (determination board) shall be competent in whose district the occupation is exercised or the organization or the establishment or branches of the latter are located.

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 27, No. 7. Berlin, Feb. 17, 1917.

2. In cases coming within the provisions of article 7, paragraph 2 of the law, that board (conscription board) shall be competent in whose district the person subject to auxiliary service is residing or sojourning.

3. In cases coming within the provisions of article 9, paragraph 2 of the law, that board (arbitration board) shall be competent in whose district the undertaking is located in which the person subject to auxiliary service exercises or has exercised the occupation on which the appeal is based, and, if this occupation is or has been exercised in a locality outside of this district, also that board in whose district the locality is situated.

With respect to localities outside of the German Empire the chairman of the central board may determine what board is the competent board.

ART. 2. If the competence of a board can not be established through the provisions of article 1 the chairman of the central board shall determine what board is the competent board.

ART. 3. If the chairman of the board appealed to does not consider the board competent he shall transmit the matter to a board which he considers competent. If the chairman of this board also considers the board not competent to act in the matter the chairman of the central board shall designate the competent board.

ART. 4. If several competent boards are appealed to on the same matter and can not agree as to a decision the chairman of the central board shall designate the competent board.

ART. 5. Decisions and orders do not become ineffective for the reason that they have emanated from a board locally not competent.

ART. 6. Before entering upon the performance of their duties members of the district boards and of the central board shall by handshake be pledged by the chairman to nonpartisan and conscientious exercise of their office and to secrecy (art. 9, par. 1, of the order of Dec. 21, 1916, relating to regulations for the application of the law on the national auxiliary service).

ART. 7. Chairmen and members of boards may be challenged for prejudice if facts are known which justify distrust in their impartiality.

Motions in this respect shall, however, be immediately rejected if it is evident that they are made for purposes of obstruction.

Challenges of members of a board shall be decided by the board after a hearing of the challenged member who shall not have a vote in the decision. In case of equality of votes his alternate shall participate in the voting.

ART. 8. The transmittal of orders in pursuance of article 7, paragraphs 2 and 3, of the law, and of decisions shall be effected through registered letter or signed receipt shall be taken on delivery.

ART. 9. Orders or decisions designated for noncommissioned officers or privates in active service of the army or navy shall be transmitted to the chief of their immediate command.

ART. 10. Transmittal to localities outside of the German Empire is to be effected through the intervention of the War Office.

ART. 11. Transmittal of orders and decisions to persons belonging to a mobile unit of the army or to the crew of a war ship in active service may be effected through the intervention of the proper military authorities.

ART. 12. The chairman shall so prepare the procedure as to make possible a speedy decision by the district board or central board. He may make investigations of all kinds, and in particular obtain official information, declarations in writing, and expert opinions; order the submission of business books and other documents; and have interested parties, witnesses, and experts examined either by the district board or central board or by authorities requested to examine them. No oath may be administered to persons examined.

With the exception of cases coming under article 34, paragraph 2, the chairman of the arbitration board must bring appeals before the board within one week after they have been entered unless an agreement has been reached sooner or the appeal has been withdrawn.

ART. 13. If on the basis of the evidence on hand the district board or the central board does not consider a case ready for decision they shall decide which of the measures designated in article 12 shall be taken.

ART. 14. Decisions may be rendered by the district boards or the central board without oral procedure.

Oral procedure shall as a rule be adopted by arbitration boards. Leaving certificates may be issued only after notification of the employer of the appeal.

If the chairman has not ordered oral procedure the district board or the central board may, with two-thirds majority, decide that oral procedure shall take place.

ART. 15. If oral procedure has been ordered, a decision may be rendered even if persons summoned to the procedure have failed to appear.

ART. 16. The proceedings before determination and conscription boards and before the central board shall be secret.

The proceedings before the arbitration board shall be public unless the board for important reasons decides that the public shall be excluded. In the interests of the national defense the War Office may order that in individual districts the proceedings shall generally be secret.

The chairman may in all cases grant admission to the proceedings to individual persons.

ART. 17. The district boards and the central board are authorized to examine witnesses and experts without administration of an oath.

If sworn testimony seems required in order to obtain truthful testimony the local court of lowest instance (*Amtsgericht*) shall be requested to take testimony under oath.

ART. 18. In proceedings before the determination and conscription boards and before the central board, the district board or the central board shall, according to the circumstances, decide whether a witness or expert may refuse his testimony or expert opinion whereby family relations and existing personal interest of the witness or expert in the decision to be rendered shall particularly be considered. The provision of article 8 of the order of January 30, 1917, relating to regulations for the application of the law on the national auxiliary service shall be applicable to the procedure before arbitration boards.

ART. 19. In the summoning of witnesses and experts the consequences of their nonappearance (art. 9 of the order of January 30, 1917, relating to regulations for the application of the law on the national auxiliary service) shall be pointed out to them.

The summoning of noncommissioned persons in the active service of the army or navy shall be effected through the intervention of the military authorities.

ART. 20. The provision of article 7 shall be applicable to the challenge of expert testimony.

ART. 21. Witnesses and experts shall receive fees in accordance with the law on fees for witnesses and experts (R. G. B. 1, 1898, p. 689, and 1914, p. 214.)

ART. 22. Interested parties may during any part of the procedure make use of the services of legal counsel, and in so far as they are not ordered to appear in person may send a representative provided with a written power of attorney. Legal counsel and representatives, through decision of the board, may be barred fron the procedure if they excessively hinder the procedure through obstructive demeanor.

ART. 23. The appearance in person of interested parties may be ordered. Article 19 shall be applicable to their summoning.

ART. 24. The district board or the central board shall determine whether minutes of the procedure, particularly of the testimony of interested parties, witnesses, and experts, shall be kept.

ART. 25. Decisions of the district board or central board rendered in pursuance of article 4, paragraph 2, article 6, and article 7, paragraph 4, of the law which are to be enforced by the chairman must be rendered in writing and contain:

1. The designation of the board;
2. The names of the chairman and of the members participating in the decision; and
3. A brief summary of the case and of the reasons for the decision. The summary of the case and of the reasons for the decision may be omitted if the complainant or appellant waive their incorporation in the decision.

Decisions not pronounced in oral procedure shall be transmitted to the appellant and according to the judgment of the district board or central board, also to other interested parties. Decisions of fundamental importance shall be communicated to the War Office.

ART. 26. Appeals in pursuance of article 6 and article 7, paragraph 4, of the law shall be submitted in writing to that board whose decision is being contested. The board may, if this seems necessary, make further investigations and is authorized to act on the appeal.

ART. 27. Determination boards become active on order of the War Office or on written request of an interested party. Those persons shall be considered as interested parties who are directly interested in the determination to be made by the board.

ART. 28. In cases to which sentence 1 of article 6 of the law relates the person who requested a decision, the owner of the establishment, the organization, and also the chairman of the board, if he considers it necessary in the interest of the public, may appeal against the decision.

ART. 29. Conscription and arbitration boards shall be bound by the decisions rendered for their district by the determination boards and by the central board.

ART. 30. If a person subject to auxiliary service, who has not been conscripted by special order of a conscription board, leaves his employment in contravention of his existing contractual obligations in order to enter the auxiliary service, his former employer may invoke the intervention of the chairman of the competent conscription board for the purpose of maintenance of the service relation.

ART. 31. The person subject to auxiliary service or his former employer may file an objection against the special written order with that board which issued the order.

Unless the interests of the auxiliary service outweigh all other considerations this order is to be rescinded if discontinuance of the former service relation would cause excessive damages. Under similar conditions the time limit set by article 7, paragraph 3, of the law may be extended. In such a case the chairman of the board is authorized to issue a preliminary decision. This preliminary decision may be appealed to the board which shall be pointed out in the preliminary decision.

ART. 32. The assignment to an occupation may be appealed by the person subject to auxiliary service as well as by his last employer.

ART. 33. Only the complainant and the employer against whom the complaint is directed are to be considered as interested parties in the procedure before arbitration boards.

ART. 34. If an arbitration board does not consider necessary the issuance of a leaving certificate in pursuance of article 9, paragraph 1, of the law, because the employment discontinued by the appellant does not come within the provisions of article 2 of the law, the board shall issue an attest certifying exemption from the obligation of obtaining a leaving certificate.

This attest may be issued by the chairman of the board immediately after receipt of the appeal. Appeal to the board against such action shall not be permissible.

ART. 35. In the case of persons released from military service for auxiliary service the arbitration board shall on the request of military authorities determine the reasons

for the discontinuance of the service relation, also in such cases which have not been brought before the board in pursuance of article 9, paragraph 2, of the law.

In such cases the board may propose to assign the person released from military service to another establishment.

ART. 36. These regulations shall come into force on the day of their promulgation.

Order of the War Office of January 27, 1917, Relating to the Formation and Effectiveness of Arbitration Boards.[1]

1. The arbitration boards prescribed by article 9, paragraph 2, of the law on the national auxiliary service have been formed, and beginning with February 1, 1917, take the place of the temporary boards created by the general commands in pursuance of the transitory regulations of December 21, 1917, issued by the Federal Council which, after January 31, 1917, legally cease their functions.

2. The headquarters and composition of the newly formed boards may be ascertained from a list transmitted to the local branch offices of the War Office, which contains the names of the chairmen and permanent members of the boards. The appointment of the chairman and permanent members has been effected directly by the War Office.

3. The War Office herewith charges the chairmen of the arbitration boards as their representatives with the appointment of the nonpermanent members of these boards. In this connection it is ordered that in all cases in which a member of one of the so-called nonmilitant (*wirtschaftsfriedliche*) workmen's organizations comes before the arbitration board a representative of the same organization shall as a nonpermanent member of the board take part in the procedure of the board. It is left to the workman in question to notify in due time the chairman of the board of his membership in such an organization and to request the appointment of a representative of this organization as member of the board. If unorganized workmen come before the board, unorganized workmen may be appointed to the board as nonpermanent members.

According to the law the nonpermanent member representing the employers as well as the employees shall be appointed from that occupational group to which the interested employee subject to auxiliary service belongs. The chairmen of boards shall for this purpose request the permanent representatives of the employers and employees in the arbitration boards to make proposals for the appointment of nonpermanent members from the individual occupational groups. If such proposals are not made by the permanent members, the occupational organizations of employers and employees within the district of these members, or, if a special organization does not exist in their district, the organizations of the nearest large district shall be requested to make proposals.

Since disputes relating to a large number of different occupations will come before the arbitration boards, it is desirable that the calendar of hearings before the boards be arranged by occupational groups. This would avoid the unnecessary and costly calling in of large numbers of nonpermanent members for every session.

Rules Governing the Cooperation of Employment Offices with the National Auxiliary Service, Issued by the War Office on January 29, 1917.[2]

GENERAL RULES.

I. The organization of the employment offices for the auxiliary service shall cover all male persons 17 to 60 years of age who are not in active service with the armed forces.

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 27, No. 7. Berlin, Feb. 17, 1917.

[2] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 27, No. 6. Berlin, Feb. 10, 1917.

II. The following three large groups shall be distinguished in the employment offices for the auxiliary service:

1. Those male persons who wish to engage in an occupation through which a military person will be released for active military service.

2. Those male persons who wish to engage in an occupation in a war industry.

3. All female persons who, although not subject to the auxiliary service law, wish to make themselves useful in a like manner as the persons designated under 1 and 2.

III. The procuring of employment shall, as far as possible, be effected in the hitherto usual manner. Any unnecessary reorganization and the additional expenditures of money and energy connected therewith shall therefore be avoided. The organization of the employment offices shall be governed by simplicity, rigor, and close cooperation.

IV. In organizing the employment offices it shall from the outset be considered that although it is intended that the national auxiliary service shall be recruited through voluntary registration, provision shall also be made for the possibility of compulsory conscription of labor, so that reorganization shall not be necessary in case of such an emergency.

V. The organization shall be effected uniformly for all the three groups designated above.

The basis of such organization is given by the following three facts:

1. That the employment offices (particularly for industrial workers) have been centralized by the creation of central information bureaus in all corps districts.

2. That the mercantile and technical employees have combined for the purpose of common employment bureaus and have put their employment bureaus at the disposal of the branches of the War Office, explicitly declaring their affiliation with the central information bureau.

3. That the female federations have declared themselves ready to adopt a like procedure.

VI. Accordingly the employment service, through the employment bureaus, embraces all persons of both sexes, inclusive of so-called metal workers, who are seeking employment with a view of releasing a military person for active military service or of working in an industrial or agricultural establishment operated in the interests of the national defense.

ORGANIZATION.

I. The local branch of the War Office is charged with the direction of the entire employment service within the corps district, and the central information bureau is charged with the direction of the executive work of the employment service.

II. The direct procuring of employment shall be effected through all classes of existing employment offices.

III. The registration offices for the auxiliary service, together with the affiliated registration offices for women are to form a new branch of the employment service. The following distinctions shall be made with respect to these registration offices:

(a) *Localities with several employment offices.*—In such localities the branch office of the War Office shall, after a hearing and agreement of all interested employment offices, designate the most suitable employment office as registration office for the auxiliary service. If the employment offices can not reach an agreement, the branch office of the War Office shall, by an order, designate the public employment office as the registration office of the auxiliary service. Several registration offices will be required in large cities. It seems desirable that the numerous employment offices of like character existing in large cities be induced to combine into one trade employment office for the duration of the effectiveness of the auxiliary service law.

(b) *Localities with only one employment office.*—In such localities this employment office shall be designated as registration office for the auxiliary service unless the employment office in question is too unimportant or is unreliable.

(c) *Localities with no employment office or with an unreliable employment office.*—For such localities it is recommended that a registration office be established in connection with the communal or State authorities.

The territorial sphere of activity of the individual registration offices shall be determined by the branch offices of the War Office in agreement with the interested employment services.

IV. The procuring of employment.

1. *Application for employment.*—(a) Each person in quest of employment shall apply to that employment office which seems most suitable to him.

(b) Whoever has no connection with or preference for any special employment office shall file his application for employment with a registration office for the auxiliary service.

These applications shall be made in writing. It is left to the branch offices of the War Office whether they will issue special forms for this purpose.

(c) Whoever applies for a military situation shall exclusively file his application with the registration office for the auxiliary service.

In the proclamations to be issued it shall be pointed out to applicants that as a rule they should file an application only with one office. If, as an exception, they wish to file simultaneously an application elsewhere, they shall be obligated to state so in their applications, so that duplication in enumeration and in sending applicants to vacancies may be avoided.

2. *Vacancies.*—Notification of vacant situations shall be made in a manner corresponding to that prescribed for the filing of applications for employment, either to the suitable or competent employment office or to the registration office, or, in case of military vacancies, to the registration office exclusively.

V. Interchange of applications and vacancies among the employment offices.

(a) The employment offices shall extensively interchange applications and notifications of vacancies.

(b) Applications and vacancies left over after such interchange shall be transmitted to the registration office for the auxiliary service.

(c) Applications and vacancies which can not be disposed of by the registration offices shall be transmitted by the latter to the central information bureaus.

(d) The central information bureaus shall transmit through the branch office of the War Office to the War Labor Office such applications and vacancies which they can not dispose of through their own efforts or through transmission to a suitable employment office.

VI. Vocational guidance.

A division for vocational guidance shall be established at each registration office for those persons who wish to engage in a new occupation. Persons living in localities with only one employment office, in which the creation of a division for vocational guidance would be difficult on account of lack of suitable experts, or for other reasons, may obtain vocational guidance in some other near-by established division for vocational guidance. In most instances it will only be possible to give vocational guidance orally.

VII. The organization of the employment service shall be effected at the earliest possible date. Wherever employment offices of a different character exist, which have been operated satisfactorily, care should be taken that their transformation for the purposes of the auxiliary service be effected gradually without any violent changes. The essential thing is that the procuring of employment be effected rapidly and without derangement, and not the scheme employed in effecting it. Brief reports as to

the state of the organization shall be made to the war labor office not later than February 15.

Appendix.—This uniform organization shall for the present be limited as follows: The release of military persons through the employment of persons subject to auxiliary service must be effected immediately and is already going on. The organization of the system of employment offices for purposes of the auxiliary service, however, has not yet been carried out. For this reason an order of the War Office of January 9, 1917, has decreed that all applications for employment of persons subject to auxiliary service who come under group 1 shall be made directly to the establishments having vacancies to fill. This procedure shall be observed until the organization of the employment offices in the individual corps districts has been fully perfected. The corresponding branch offices of the War Office shall independently determine this point of time.

WAR LABOR CONFERENCE BOARD.

In the February, 1918, issue of the MONTHLY REVIEW (pp. 77 to 81) there appeared a brief account of the effort being made to secure uniformity in the Federal labor policy, based upon centralization under the Secretary of Labor, as labor administrator, of all agencies for the provision, distribution, housing, and other care of workmen in war industries. Mention was made of the appointment, on January 16, of an advisory council with ex-Gov. John Lind, of Minnesota, as chairman, to assist the Secretary of Labor in the administration of a national labor program. On January 28 an outline of a scheme of organization was submitted by the advisory council to the Secretary of Labor for approval, and the agencies of administration and plan of organization as suggested are noted in full in the article to which reference has been made.

At the time of his approval of this labor administration program the Secretary of Labor called upon the managing director of the National Industrial Conference Board, a federation of employers throughout the country, and the president of the American Federation of Labor to suggest five representatives, respectively, of employers and employees, who should constitute a war labor conference board for the purpose of reaching agreements upon principles and policies which should govern their relations The appointment of this board, which was subsequently made, is an effort to bring employers and employed to a fuller appreciation of their mutual interests and to stimulate in each a conviction that prejudice and bitterness must give way to harmony of action and cooperation of effort in the common task of winning the war.

The questions to be considered by this conference board of employers and union leaders cover practically the entire range of subjects which have been the basis of disputes or controversies between employers and their workmen, and it is the purpose of the board to arrive at some kind of a definite understanding or agreement that

will have the effect greatly to reduce, if not altogether to obviate, serious misunderstandings which have heretofore engaged the attention of capital and labor. Among the questions to be considered are: Basis for wage determination; strikes and lockouts; piecework prices and price fixing; method of eliminating improper restrictions on output of war materials from whatever cause; practice to govern dilution of labor; discrimination against union and nonunion men; admission of union agents to plants; method of promptly adjusting disputes at their source through boards containing equal representation of employers and employees; right of workmen to organize.

Aside from the five representatives each of employers and employees, the board includes two representatives of the public who act alternately as chairmen. These are Hon. William Howard Taft, ex-President of the United States, and Frank P. Walsh, ex-chairman of the United States Commission on Industrial Relations. The other members of the board are as follows, the first five representing employers, and the second five representing employees:

L. F. Loree, New York City, president of the Delaware & Hudson Railroad Co.; chairman of the board and executive committee of the Kansas City Southern Railroad Co.; president of the Hudson Coal Co., Northern Iron & Coal Co., Schuylkill Coal & Iron Co., etc.

C. Edwin Michael, Roanoke, Va., president of the Virginia Bridge & Iron Co.

Loyall A. Osborne, New York City, vice president of the Westinghouse Electric & Manufacturing Co.; chairman of the executive committee of the National Industrial Conference Board.

W. H. Van Dervoort, East Moline, Ill., president of Root & Van Dervoort Engineering Co.

B. L. Worden, New York, vice president of the Submarine Boat Corporation.

Frank J. Hayes, Indianapolis, Ind., president of the United Mine Workers of America.

William L. Hutcheson, Indianapolis, Ind., president of the United Brotherhood of Carpenters and Joiners of America.

William H. Johnston, Washington, D. C., president of the International Association of Machinists.

Victor A. Olander, Chicago, Ill., representative, International Seamen's Union of America.

T. A. Rickert, Chicago, Ill., president of the United Garment Workers of America.

The appointment of this conference board is one of the developments of the deliberations of the advisory council of the Department of Labor. When the first meeting of the conference was called by the Secretary of Labor, John Lind, chairman of the advisory council, made the following statement regarding its work:

To-morrow's conference may easily prove one of the most significant developments in the history of America's participation in the war. In a sense, it is unprecedented in American industrial history.

For the past 10 months employers and employees alike have given evidence of their whole-souled willingness to devote themselves to the national cause. Yet, in spite of the most laudable intentions and the earnest effort of individuals on both sides,

there has seemed at times to be a lack of interrelation between the two great groups on whose work must depend the success of production—production which constitutes the very essence of success in a war which is above all else an industrial war. Misunderstandings and bad teamwork have perhaps inevitably shown themselves at times.

To accommodate the basic differences between the two groups and unite industry as one behind the war program is the real purpose behind the conference which begins to-morrow. If the purpose of the meeting is to be achieved—and the Nation can not afford to have it fail at this critical time—both sides must enter the conference room in a spirit of sympathy and mutual concession for America's welfare. Both sides must stand ready to sacrifice preconceived ideas based on past prejudice and bitterness for the supreme purpose of the preservation of the Nation.

Just what form the understanding will take or what solutions of the knotty problems at issue will be reached is for the conference to discover. All that they should remember is that the Nation's interest at this time is higher than the interest of any group and that the Nation is looking on. The problem of man power is the problem which the nations of the world are facing. It is for the members of this conference to decide whether this meeting may prove the turning point of the war and perhaps even the resolution of a crisis in America's history.

INDUSTRIAL AND AGRICULTURAL LABOR AND THE NEXT ARMY DRAFT.

In view of the fear which has been expressed in some quarters that industry, and especially agriculture, will be considerably disturbed by an excessive and indiscriminate withdrawal of men for Army service in the next draft, the War Department has recently issued a statement bearing upon the matter. After indicating in the first place that the men will be drawn from civil life only as fast as they can be assimilated by the Army, and that based on a total of 800,000 to be called, each State will be apportioned its quota from time to time, so that comparatively few will be required at any one time, the department announces the following policy as affecting industrial and agricultural labor:[1]

There are difficulties confronting the Nation in the supply of labor appurtenant to agriculture. Class 1, from which new levies are to be withdrawn, will contain many more men than are at present required for the Army. It would be a most unscientific and fatuous step if the men in class 1 were called indiscriminately without regard to the labor situation in agriculture. Therefore, the local boards will be directed to fill their quotas in the order of liability of men in class 1 as determined by the national drawing, except that where it is shown that a registrant is completely and assiduously engaged in the planting, cultivation, or reaping of a crop, his call to the colors shall be deferred to the foot of the quota of his board as long as he continues to be so engaged.

Whenever any registrant whose call to the colors has been deferred by reason of his engagement in agriculture is shown to have been idle on the farm on which he is engaged or to have trifled with the deferment that has been accorded him, the boards will forthwith induct him into military service if his order number has been reached in the meantime. The effect of this expedient is to grant furloughs from service prior to actual call to the colors to the men so greatly needed in the production of this year's crop.

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[1] Official Bulletin, Mar. 12, 1918.

This is not, however, the only expedient that is to be adopted to conserve the supply of labor appurtenant to agriculture and to mobilize all means for increasing the harvest for the agricultural season of 1918.

There is now pending before Congress a bill authorizing the Secretary of War to grant furloughs, with or without pay, to men in the Army to enable them to engage in industrial and agricultural pursuits. The purpose of this bill is to relieve serious situations in particular instances in which men who are the mainstay of farms have been inducted into the service either through voluntary enlistment or selection and whose services during the present emergency in agriculture are needed. These furloughs will be granted after consideration of the circumstances of the individual case in which they arise and when the military situation is such that they can be granted without too great disruption and disorganization of the Army or of any particular organization of the Army.

As to further means to protect agriculture, a new regulation has been promulgated authorizing agricultural students in their senior year in land-grant colleges to enlist in the Enlisted Reserve Corps of the Quartermaster's Department, provided their class standing is such as to place them in the upper third of their class. By this means it will be possible to defer the draft call of such young men in order to enable them to perfect themselves as agriculturists and thereafter to protect them in such services as it may seem that they should perform in the best interests of the Nation.

The whole industrial and agricultural situation is being subjected to a very comprehensive study in order to discover any means that may be taken to protect and augment the labor supply appurtenant to industry and agriculture without precluding the prompt and orderly progress of our military plans. It is confidently believed that great progress can be made along this line and that more effective measures than any yet devised can be put into operation to attain the desired end.

It must be emphasized that this is a war of mechanics. The need of the several armed forces for men highly skilled in technical and mechanical pursuits is greater than in any former war. Yet this need for specially skilled men finds the Nation under a necessity for increasing its production in almost every line of industry. Withdrawals of men from industry must be made, and these withdrawals must take men who might otherwise be deferred on account of their special qualifications and skill. The necessary numbers of such skilled men will be obtained in one of three ways.

First, men already in the military service who have such special skill will be taken from the line regiments and assigned to the staff organizations and departments where their skill is needed. Second, men classified by the selection boards, even though they may have been placed in a deferred classification, will be withdrawn with great care and particularity from the industries of the Nation for special service in staff corps and departments. Third, young men of draft age with certain educational qualifications will be inducted into the service and sent to universities, colleges, and technical and secondary schools to be instructed in technical arts until they have acquired such proficiency as will justify their assignment to the special units that are being organized in considerable numbers.

In accordance with this plan the Provost Marshal General has already called upon the States for some 10,000 skilled artisans and will shortly call upon the States for 10,000 young men, graduates of grammar schools, who will be sent before the 1st of April to various technical and other schools throughout the United States for a two months' course of training. Regularly thereafter an increasing stream of selected men will be sent through educational and other training institutions for this purpose.

To sum up, it may be said that there will be no sudden withdrawal of great numbers of men from the ranks of industry and agriculture during the coming summer, but that men will be drawn in relatively small groups throughout the year in such a way as to

create the least possible interference with industry and agriculture. Men in deferred classes as well as men in class 1 will be selected in small numbers either on account of their special technical qualifications or for the purpose of sending them to schools where they will be given an opportunity to acquire such qualifications.

In this connection Secretary Houston, of the Department of Agriculture, has issued a statement outlining the part each city may take in solving the farm-labor problem. The statement is as follows:[1]

Some time ago I issued a statement concerning the farm-labor problem. It was pointed out that there will be farm-labor difficulties to overcome this year as last and that in certain sections, especially in the neighborhood of large industrial centers, the difficulties will be acute. The lines of effort were indicated along which the Departments of Agriculture and Labor, through representatives in various States cooperating with the agricultural colleges and other agencies, are working to furnish assistance.

Briefly restated, these agencies are doing the following things: (a) Making a survey of the farm-labor situation in each community with a view to discover possible surpluses of labor in order to be ready to assist in furnishing labor wherever it is needed; (b) assisting again in shifting labor from community to community and from State to State as in past years; (c) promoting fuller cooperation among farmers in the same community; (d) making available, so far as possible, high-school boys in rural districts who have had experience in farming and who are not normally, regularly, or fully employed in farming operations; (e) making every effort to see that there is no obstacle in the way of the production of a larger supply of farm machinery and its fuller use as a supplement to hand labor.

Last year, in spite of all the difficulties, the farmers planted the largest acreages in the history of the Nation, harvested record crops of most important things except wheat, and succeeded in greatly increasing the number of live stock. Since last year skilled farm labor has been given deferred classification and the Secretary of War has asked for power to furlough soldiers in the National Army if their training permits, so that they may return to their farms and assist.

It is believed that the farmers of the Nation can, by effective organization and cooperation, with such assistance as can be furnished, again overcome labor difficulties and produce large quantities of foods, foodstuffs, and live stock.

There is an opportunity now for urban people sympathetically and constructively to study the farm-labor situation and to render assistance. In many towns and cities there are men who have had farming experience, who are able-bodied, and who would doubtless be willing to serve the Nation in the field of agriculture at this time. Especially for the seasonal strains of planting, cultivating, and harvesting it will not be too much to ask such men to aid the farmers in the necessary undertaking of maintaining and, if possible, supplementing the food supply in order to feed the armies and to sustain the civilian population behind them. If soldiers are willing to serve in the trenches, to dig ditches, build railroads, and risk their lives, many civilians can well afford to spare a part of their time to serve in the furrows and in the harvest fields.

If it appears that the farmers of a community or region are not able to secure the necessary labor by the usual methods, then the leaders in the town or city immediately dependent upon that region should organize, establish touch with representative farm leaders, and see if they can not assist in solving the problem. In so doing they will not only aid the farmers of the Nation but they will vitally contribute to their own well-being and to that of their community.

[1] Official Bulletin for March 6, 1918.

LABOR STANDARDS IN THE MANUFACTURE OF ARMY CLOTHING.

On August 24, 1917, the Secretary of War appointed a board of control for labor standards in the manufacture of Army clothing, naming Louis E. Kirstein, of Boston, as chairman, and Mrs. Florence Kelley, general secretary of the National Consumers' League, New York, and Capt. Walter E. Kruesi, Quartermaster Corps, United States Reserves, as members. The appointment of this board, which was noted in the MONTHLY REVIEW for October, 1917 (pp. 30 to 33), was the result of a preliminary investigation which indicated that Army clothing was being manufactured in some cases under conditions which were not in accord with standards which it was believed should be maintained on all work done for the Government. Since the appointment of this board a standard form of contract has been adopted by the Quartermaster's Department, containing provisions binding contractors to maintain at least a minimum standard of wages fixed by the board and in all labor disputes to accept the board's decision as final. The tangible results of the board's activities include the transfer of the manufacture of Army uniforms from tenements to shops where sanitary standards can be enforced, and an order requiring all employers to install modern fire-prevention appliances.

The primary purpose for which the board was created having been accomplished, in the opinion of the War Department, it was announced on January 23, 1918, that "the work is now so organized that remaining activities are administrative in character and can best be done under the direct control and supervision of the Quartermaster General," and that for this reason "the board has, therefore, this day been dissolved."

In recognition of the administrative character of the work, consideration of the whole matter of labor standards has been turned over to the direct supervision of the Quartermaster General, as suggested, who has designated what is known as the administration for labor standards in the manufacture of Army clothing, with Louis E. Kirstein as administrator. The original board of control devoted its entire attention to conditions surrounding the manufacture of Army uniforms; attention has since been directed to labor standards in the manufacture of Army shirts, and the activities of the new organization will be extended to include other Army clothing.

CHANGES IN WORKING CONDITIONS AGREED TO BY RAILROAD SHOPMEN.

To assist the Government in the operation of the railroads and to meet the present emergency in the repairing of locomotives, the railroad shop employees, acting through the president of the railway

employees' department of the American Federation of Labor, and the international officers representing the machinists, boiler makers blacksmiths, carmen, sheet-metal workers, electrical workers, and apprentices and helpers, have agreed to certain changes in reference to working conditions, which were announced by the Director General of Railroads during the latter part of February, as follows: [1]

1. The hours of labor in shops and roundhouses to be governed by the necessities as indicated by the general condition of equipment. At shops and roundhouses now working one shift which totals less than 70 hours per week, an increase, preferably on a 7-day basis, may be made. Where desired, working hours may be so arranged that men will be released at 4 p. m. on one day each week. Existing working agreements to govern the rate, subject to the action of the Railroad Wage Commission.

2. All apprentices who have served three years may be promoted to mechanics and paid the going rate of wages for that position. Such promoted apprentices to be given the right of practical experience on work of their respective trades to which they had not been advanced during the three-year period.

3. Helpers in their respective trades who have had five or more years' experience may be promoted to classification of mechanics, they to receive mechanics' rate and be given an opportunity to learn all branches of the trade.

The duly authorized committeeman of each trade in each shop covered by agreement shall be consulted, and mutual understanding arrived at in promoting helpers, and the ratio of helpers to be promoted, to the number of mechanics in any one trade in any one shop, shall not exceed 20 per cent.

The international officers and general chairmen of each trade on each road covered by agreements shall be furnished a complete record of the men promoted.

4. Mechanics applying for employment will not be denied such employment for any cause other than inability to perform the work; this preference rule to be in effect as long as three-year apprentices or promoted helpers are employed at mechanics' rates.

5. Where a reduction is made in the force of mechanics, promoted helpers in accordance with their seniority shall be set back first; then advanced apprentices; no mechanics to be laid off until all such promoted helpers and apprentices have been set back.

6. The promotions above referred to are to meet an emergency caused by the war, and shall cease at the close of the war.

CONDITION OF RAILROAD EMPLOYMENT DEFINED BY DIRECTOR GENERAL OF RAILROADS.

Since the Government assumed control of the railroads of the country on January 1, 1918, some misunderstanding appears to have arisen among employees of the railroads as to their status and the security of their positions, although it had been stated in general order No. 1 that all officers and employees of the transportation systems should continue their regular work on the terms of employment in effect prior to January 1. The Director General of Railroads,

[1] From the Official Bulletin for February 21, 1918, p. 3.

in an effort to correct wrong impressions, issued on February 21, 1918, order No. 8, as follows:[1]

To correct wrong impressions that may exist regarding the employment and conditions of labor in railway service, it is, until further order, directed that:

1. All acts of Congress to promote the safety of employees and travelers upon the railroads, including acts requiring investigation of accidents on railroads and orders of the Interstate Commerce Commission made in accordance therewith, must be fully complied with. These acts and orders refer to hours of service, safety appliances, and inspection.

Now that the railroads are in the possession and control of the Government, it would be futile to impose fines for violations of said laws and orders upon the Government; therefore it will become the duty of the Director General in the enforcement of said laws and orders to impose punishments for willful and inexcusable violations thereof upon the person or persons responsible therefor, such punishment to be determined by the facts in each case.

2. When the exigencies of the service require it, or when a sufficient number of employees in any department are not available to render the public prompt transportation service, employees will be required to work a reasonable amount of overtime. So far as efficient and economic operations will permit, excessive hours of employment will not be required of employees.

3. The broad question of wages and hours will be passed upon and reported to the Director General as promptly as possible by the present Railroad Wage Commission. Pending a disposition of these matters by the Director General, all requests of employees involving revisions of schedules or general changes in conditions affecting wages and hours, will be held in abeyance by both the managers and employees. Wages, when determined upon, will be made retroactive to January 1, 1918, and adjusted accordingly. Matters of controversy arising under interpretations of existing wage agreements and other matters not relating to wages and hours will take their usual course, and in the event of inability to reach a settlement will be referred to the Director General.

4. In Order No. 1, issued December 29, 1917, the following appeared:

"All officers, agents, and employees of such transportation systems may continue in the performance of their present regular duties, reporting to the same officers as heretofore and on the same terms of employment."

The impression seems to exist on some railroads that the said order was intended to prevent any change in the terms of employment during governmental operation. The purpose of the order was to confirm all terms of employment existing upon that date, but subject to subsequent modifications deemed advisable for the requirements of the service. Any contrary impression or construction is erroneous. Officers and employees will be governed by the construction here given.

5. No discrimination will be made in the employment, retention, or conditions of employment of employees because of membership or nonmembership in labor organizations.

[1] From the Official Bulletin for February 23, 1918.

PROVISION FOR THE DISABLED AND VOCATIONAL EDUCATION.

BY MRS. M. A. GADSBY.

VOCATIONAL EDUCATION CONFERENCE AT PHILADELPHIA.

The war is proving a remarkable impetus toward vocational education. Maximum output demands trained workers. The Government departments, as well as the manufacturers of necessary war products, are looking to vocational schools and to vocational educators to help them train men and women to fill the places of those who have gone to the front and to fill the new places which the extraordinary demands of industry are making necessary. This was the motif which prevailed throughout the meetings of the convention of the National Society for the Promotion of Industrial Education held in Philadelphia February 21 to 23, 1918.

It is impossible to give synopses of all of the papers presented at this conference. It has therefore been considered advisable to omit many of the reports dealing with the technique of training and to confine this article to a review of some of the points brought out in the reports most closely related to industry.

The program centered around four main topics, (1) Education for war industries, (2) Administration of the Smith-Hughes Act, (3) Training and employment of women, and (4) Rehabilitation of the disabled.

EDUCATION FOR WAR INDUSTRIES.

Mr. E. C. Felton, of the Pennsylvania Department of Labor and Industry, outlined the work of that department in meeting the demands for labor in two of Pennsylvania's most important war industries, namely, agriculture and shipbuilding. The problem of agricultural labor supply is a new one. The lure of short hours and high wages in the factories has resulted in 1,000 vacant farms in one county in Pennsylvania. The State is relying upon three sources of agricultural labor supply—(1) a small number of retired farmers, a register of whom is kept at the employment offices, (2) women, and (3) young men of high-school age, who are being organized as reserve workers. Farm camps for training young men are being arranged under the supervision of trained agricultural workers. To keep more closely in touch with the situation, the department has arranged

for a man familiar with agriculture and with the district to visit personally the farmers in each of the more important agricultural districts and familiarize himself with the needs of the individual farms. The State has been divided into six zones, with a central employment office in each, and suboffices in each important center in the zones. Employers apply to local offices, which, in turn, cooperate with other offices, both local and central, in satisfying the need for workers. More than 70 trades are necessary in building steel ships. Thirty-eight per cent of the ships contracted for by the Government are built in the vicinity of Pennsylvania. To meet the resulting demand for labor in the shipbuilding trades, the department, in cooperation with the Public Safety Committee, is studying trades which demand similar skill and which are less essential at this time, in order that such labor may be transferred to shipbuilding, and is arranging for short courses for these workers in the technical schools.

The Industrial Training Department of the Emergency Fleet Corporation is also training men from kindred trades and vocations that they may become valuable for shipbuilding in as short a time as possible. This work, as described by Mr. E. E. MacNary, involves the establishment of a series of training centers in the vicinity of the shipyards. The first center has been established at Newport News, Va., where a six weeks' course is given. Shipyards from different parts of the country are sending skilled craftsmen to this center, paying them wages and their necessary expenses. At the completion of the course these men return to their yards and conduct training classes in their own trades for new workers and for the trade improvement of men already in those trades. This training course involves three phases of instruction, (1) analysis and arrangement of trade operations or jobs in an instruction order, (2) how to give effective instruction, and (3) practice in instructing under conditions of actual production or construction. A plan has been arranged whereby the Emergency Fleet Corporation shares the cost of instruction with the shipyards and pays a bonus of 50 cents per day to men under instruction, provided they remain in the training center for 78 days. Yards sending men to the center have made most satisfactory reports on the progress their instructors have made as a result of their training.

The Bethlehem Steel Co. is finding its prewar methods of training inadequate to meet the present emergency. Mr. Stanley Zweibel, director of industrial education for that company, gave an account of the work of the shop school established in Bethlehem. The shop was canvassed and 60 to 70 of the more promising mechanics were gathered together to be trained as teachers. These men were taught to analyze the jobs, one operation at a time. They were then given

practice work in teaching, with each instructor in charge of four inexperienced men. By eliminating the inefficient instructors a competent teaching force is being built up.

Miss Mary Gilson, representing Joseph & Feiss Co., emphasized the necessity for training operators in as many of the main operations in the shop as possible, so that the employee may thoroughly understand the processes involved in making the shop product, and can be shifted from one department to another, if necessary.

Mr. J. P. Munroe, of the Federal Board for Vocational Education, described the war emergency vocational work of that board in undertaking schemes for training in the States and schools cooperating with the board of mechanical and technical workers for the Army, the Navy, and the Shipping Board. This work is too extensive to permit of an adequate description here. A partial account, however, may be found in the following bulletins published by the board:

Bulletin No. 2. Training conscripted men for service as radio and buzzer operators in the United States Army (International Code).

Bulletin No. 4. Mechanical and technical training for conscripted men. (Air Division, U. S. Signal Corps.)

Bulletin No. 7. Emergency war training for motor-truck drivers and chauffeurs.

Bulletin No. 8. Emergency war training for machine-shop occupations, blacksmithing, sheet-metal working, and pipe fitting.

Bulletin No. 9. Emergency war training for electricians, telephone repairmen, linemen, and cable splicers.

Bulletin No. 10. Emergency war training for gas-engine, motor car, and motorcycle repairmen.

Bulletin No. 11. Emergency war training for oxyacetylene welders.

Bulletin No. 12. Emergency war training for airplane mechanics—engine repairmen, woodworkers, riggers, and sheet-metal workers.

ADMINISTRATION OF THE SMITH-HUGHES ACT.

An afternoon and evening were devoted to discussion of the problems of administration under the Smith-Hughes Act: the necessity for coordinating the new educational machinery created by that act and the training of teachers to develop it. Mr. J. P. Munroe reviewed the provisions of the act, and the difficulties encountered by the Federal board in interpreting it. The Government contributes money for training boys and girls over 14, and of less than college age, for wage-earning employments. It will pay one-half the salary of teachers, supervisors, and directors in agriculture, in trade, in home economics, and in industry, and will pay for the training of teachers in all these subjects. This money is appropriated only upon condition that the States or local communities in which the money is to be spent contribute an equal amount for the same purpose. The amount appropriated is to increase each year until 1926. He emphasized the fact that the training must be for wage earning, according to the law,

but that the aim is to make it as broad as possible and not merely utilitarian.

The work ahead of the Federal Board for Vocational Education and the State boards was outlined by Mr. C. A. Prosser, director of the Federal board. He emphasized the necessity for State legislation subsidizing State boards and giving them power to extend the age limit for compulsory education. He also urged that the States take advantage of the Federal offer.

Mr. L. S. Hawkins, also of the Federal Board for Vocational Education, called attention to the necessity for professional, technical, and practical experience on the part of teachers, and to the need for an adequate system of practice teaching in preparing them for teaching agricultural subjects. Practice teaching, he said, should be the teacher's laboratory.

WOMEN IN INDUSTRY.

The field for industrial and trade training for women was discussed by Mrs. A. L. Burdick of the Federal Vocational Board, who spoke, as she said, "without being released for publication." The occupation for which training is offered women should have four essential characteristics. (1) It must have teachable content, i. e., it must not be "a job which just anybody can do," it must take an appreciable time to learn, and it must have a definite body of knowledge and a progression in its processes. This would exclude the processes in the candy trade canning, etc. (2) It should not be highly seasonal. (3) It should offer prospects for wage advancement. (4) The occupation must be able to absorb a sufficient number of workers so that training does not overstock the market. As to occupations for which training should be offered, "any occupation in which there is an unquestionable shortage of labor, and in which an analysis shows that women can replace men satisfactorily, should be considered a field for war emergency training." A trade curriculum for women should include courses of instruction in the economic and social problems which affect them as wage earners and which are fundamental to the welfare and general education of the worker. This instruction should include such subjects as trade organization, trade agreements, labor legislation, and the facts relating to wages, hours of work, and the relations between employer and employees.

Mrs. Burdick formulated an "Apostle's Creed" for those interested in the welfare of women workers. The "creed" follows:

Notwithstanding the fact that the cause has been handicapped by the popular and fallacious belief of the short period of women's service in industry;

By the false standards in the mind of the worker, making her sensitive to the social aspects of her labor, and limiting her industrial advancement;

By the fact that the occupations for which women train are subject to the hectic whims of fashion and caprice and much skill is lost unnecessarily in swift adjustment,

we believe that trade and industrial education for girls and women will enable them to do better work for better pay and ultimately become more independent.

We believe that this training should result in immediate benefit to the worker either through service rendered, a higher grade product, increased production, progress in the occupation and better pay.

We believe that placement in industry is necessary to a scheme of training for trade and industrial workers.

We have corroborative evidence that trade or industrial training for the young girl with limited school expectancy lifts her over the unskilled processes that catch and hold young workers and prevents the shifting and drifting in unprofitable employment and enables her to enter industry at a higher initial wage.

We believe that continuation schools for young workers is an immediate necessity to enable girls to make an intelligent and profitable transition from child employing industries into adult employment.

We believe that vocational training for any individual or for any group can not be accomplished for once and for all by training initial to employment, but the worker must continue an opportunity for training where advancement is hampered for lack of it.

We believe that the expansion of opportunity for work for women is accompanied by a narrowing of condition which makes training possible, hence women must be prepared to enter a better class of industries.

To this end every effort should be made (1) for analysis of all possible women-employing industries for the purpose of giving the worker a chance to escape bearing the cost of casual and unorganized learning period, and (2) to open up new lines of work in which the peculiar genius and skill of women may find an outlet. We must adapt women for better trades and adapt the trades to women workers, so as to secure the best possible results. This is the need and the opportunity for vocational training, and remember the prayer of the enthusiast: "Lord, make the indifferent different."

Mrs. Hilda Muhlhauser Richards, of the Federal Employment Service, emphasized the fact that there is no shortage of male labor and consequently no reason why women should be hurried into industries in which the work is much better suited to men.

REHABILITATION OF DISABLED SOLDIERS.

One session was devoted to a discussion of the rehabilitation of disabled soldiers. The only agency which has yet been given authority to attack this problem in America is the War Risk Insurance Bureau, in the Treasury Department. The provisions of the act of September 2, 1917 "to authorize the establishment of a Bureau of War Risk Insurance," and the amending act of October 6, were outlined by Mr. Richard B. Jones, executive commissioner of the bureau. These acts provide for allotments and allowances for the families of men enlisted in the military or naval forces; compensation for death or disability of every commissioned officer and enlisted man, and of every female member of the Army and Navy Nurse Corps, when employed in active service, and insurance against death or total permanent disability for every officer, enlisted man, and nurse who desires to comply with the conditions specified in the act.

Section 304 of the act as amended, further provides:

> That in cases of dismemberment, of injuries to sight or hearing, and of other injuries commonly causing permanent disability, the injured person shall follow such course or courses of rehabilitation, reeducation, and vocational training as the United States may provide or procure to be provided.

So far, this bureau has been forced to devote its attention exclusively to the compensation, allowance, and insurance features of these acts. Subsequent bills have been drafted for the consideration of Congress providing for the transfer to other governmental agencies of responsibility for the training and employment of disabled members of the forces, but as yet no definite action has been taken.

Three of the other governmental agencies interested in this work were represented at the conference. Maj. J. W. Bloom, representing the United States Army Recruiting Station, discussed the treatment of disabled soldiers from the medical point of view. Mr. C. H. Winslow of the Federal Vocational Board discussed the training of the disabled and outlined the recent studies published by the board on this aspect of the problem. These studies, issued in February, 1918, are: Bulletin No. 5, Vocational rehabilitation of disabled soldiers and sailors; Bulletin No. 6, Training of teachers for occupational therapy for the rehabilitation of disabled soldiers and sailors. Mrs. M. A. Gadsby, representing the United States Bureau of Labor Statistics, pointed out the difficulties involved in employing the disabled. The Bureau of Labor Statistics has been collecting and publishing, in its MONTHLY REVIEW, data on this subject since America first entered the war, and through its study of the problem as it has been met in other countries has become familiar with some of the difficulties which will be encountered in connection with the work of finding jobs for our disabled soldiers.

Two points were stressed by the last speaker: (1) It is necessary that the state of the general labor market be carefully watched, so that the supply of men reeducated in any particular trade does not exceed the demand for labor in that trade, and it will be necessary to work out some system of coordination between schemes of training and to study conditions which determine the demand for workers in particular trades. (2) The wage problem also presents serious difficulties. Will the disabled man always be able to earn as much as his able-bodied competitor in the trade? If the employer is asked to pay a man more than he can actually earn, will he not be tempted to protect himself by employing only the able-bodied? Less scrupulous employers might take advantage of the fact that the man who receives a pension to supplement his wages may undersell his able-bodied competitor, and pay the pensioner less than the market price for his labor.

To facilitate the solution of such problems of readjustment, England has found it advisable to set up trade advisory committees and advisory wage boards, consisting of equal numbers of employers and workmen, to consider questions as to the kind of training needed, the period of training necessary, the number of men who can be safely trained, and all questions affecting rates of wages. So far as organization for carrying on the work is concerned there are several examples in the systems of other countries. England utilizes the system of employment exchanges which had already been developed to deal with general employment problems. Canada has instituted special employment machinery to take care of this phase of the work. It consists of a central employment office, provincial employment offices, and local committees throughout the districts. The work of readjusting our military cripples to civil life is calling attention to our neglect of the victims of industrial accidents and to the necessity for extending the provisions made for the reconstruction of war cripples to meet the needs of our industrial army.

Private agencies have already begun the work of training the disabled. The Red Cross Institute for Crippled and Disabled Men, as described by Mr. D. C. McMurtrie, director of the institute, was founded early in the summer of 1917. It is concerned with vocational education of disabled men and their placement in suitable occupations. Preliminary to undertaking the work of the institute a detailed study was made of 361 civilian cripples (amputation cases) in New York City in order to determine to what extent men who have incurred such disabilities had been able to return to their former occupations or to take up new ones. A report of this investigation was published in a recent bulletin of the institute.[1] As the result of the investigation, the work of the institute is now being organized and machinery is already being installed for the use of classes for training handicapped men in the making of artificial limbs, in drafting, casting for monotype work, photography, and acetylene welding. Other classes will be added later.

The employment bureau operated in New York City by the Hudson Guild has been taken over by the institute. As in the other work of the institute only orthopedic cases are considered. Statistics are kept of the number of placements, the type of disability, the position secured, and the wages paid. Records of such placements are suggestive of possible situations for future cases.

The proceedings of this conference will be published shortly by the National Association for the Promotion of Industrial Education. The offices of this association are located at 140 West Forty-second Street, New York City.

[1] The Economic Consequences of Physical Disability: A Case Study of Civilian Cripples in New York City, by John Culbert Faries, of the Staff of the Red Cross Institute. New York, Red Cross Institute for Crippled and Disabled Men. 1918. 11 p. (Publication Ser. 1, No. 2.)

TRAINING DISABLED SOLDIERS IN CANADIAN INDUSTRIES.

An industrial survey for determining the openings for training disabled soldiers in industries was begun in Canada in the fall of 1917 by the vocational branch of the Military Hospitals Commission—Mr. Gerald A. Boate, officer in charge of the survey—and carried on for several months following. The purpose was to make a short intensive survey of typical industries and business houses to get their judgment with reference to training and employment and to determine, by time and motion study, whether or not disabled men could be there employed, instead of waiting for the men themselves to encounter difficulties on entering an industry.

The work was started in Montreal and extended to Toronto, Winnipeg, Ottawa, and Vancouver as centers, whence it was carried to other cities and towns of the Dominion.

The agents conducting the survey, who were returned officers, first familiarized themselves, in hospitals and sanatoriums, with the various disabilities and handicaps of the men. Following this step they made themselves thoroughly conversant with the equipment, courses of study, and methods of instructions of the reeducational schools.

The actual surveys were made with the assistance of the employers, who were interested and glad to cooperate and who gave freely of the time and information of foremen and other bosses.

The data from the schedules have been carefully studied, card indexed, and tabulated. The information is of great value in several ways: 1. It gives the vocational officers of the various provinces or districts an understanding of different jobs or occupations, so that from a knowledge of a man's previous experience, learned by interview, they can select an occupation within his grasp as a disabled man to which his training or experience is related. 2. It is extremely valuable to the men themselves, many of whom have had distorted ideas of the work which they would be able to do and the remuneration they might expect to receive. 3. It is supplied to the reeducational schools, affecting their selection of equipment and courses of study and helping to determine the number of men who may be trained for a particular occupation without danger of overcrowding As far as possible the final stages of the courses are given in the industries for which the men are being trained, thus bridging the awkward gap between school and actual employment.

The survey brought out the fact that though many occupations require the services of able-bodied men there are many others in which cripples and women already are employed. From a study of a few of the schedules it is evident that a large number of occupations can be performed by persons having an artificial or deformed leg, defective hearing, or the sight of but one eye. The statement is

made that in many machine and other operations several fingers of the worker may be missing and he will be able to perform the work required, provided there are enough left to hold tools and to pick up small objects. Shell shock resulting in nothing worse than stammering or momentary muteism ordinarily need not debar, but a case is here recorded of a returned soldier who had to leave a boiler-making job after six weeks' employment on account of the noise.

The possibilities of favoring a disabled worker by allowing him to sit at his work, though the general rule is to stand, or to have material on a table though the other workers stoop for it, are given emphasis. In a considerable number of cases the inquiry as to the general education required is answered by the statement that the ability "to read, write, and keep his time" is all that is necessary.

In addition to the customary information as to firm name, address, business, officers, date of survey, etc., the questionnaire calls for data in the case of each occupation in the plants and factories visited, as to conditions of labor, training needed, physical capacity for the work of those having specified disabilities, etc.

The following selections, copied verbatim, except where identification might result, will serve to show how the questionnaire is made out and the nature of the information secured.

Car Upholstering.

The foreman explained very carefully the nature of this work, also demonstrating its nature and possibilities. Car upholstering is quite different from furniture or automobile work. A man who has been trained as a furniture upholsterer could not work on car seats. A car trained upholsterer would not be of much use to a furniture man. However, I learned that the season for car upholstering is about seven months each year. The idle season in car upholstering is the busy season in the furniture business and most of the workmen in this department find ready employment with the furniture repair houses, making a much better wage with the furniture men in the summer than they do with the car company in the winter. The upholsterers in the car department use leather, carpet, rattan, and plush for finishing up seats and backs of first class passenger coaches and Pullman cars. After the frame of the seat is made, the springs are inserted. On the top is a double stuffing, and on top of that a stuffing of better quality of cotton, hair, or sea grass. The final process is applying a surface of leather, carpet, rattan, or plush. All of the rattan comes ready woven, glued to a backing of canvas. This material is bought by the company and is merely cut to the right sizes to make the tops, which are either tacked or sewn into place. Upholsterers are in demand by the furniture houses from May to October at about 45 cents per hour. The foreman considered this a good class of work for disabled men, providing they have full use of their arms and hands. It is light pleasant work, not requiring excessive muscular strain.

Detailed analysis of upholstering.—Upholsterers are divided into the following classes:

First class.—Twenty employed. Receive 36 cents per hour plus 25 per cent additional on bonus system. This is all piecework.

Hours per week.—Fifty.

Second class.—Ten employed. Receive 33 cents per hour. These are good men on plain work.

Third class.—Five employed. Receive 30 cents per hour plus 25 per cent additional on bonus system—piecework.

Hours per week.—Fifty. These men are able to work on curtains and cheap seats, chairs where there are no spring edges.

Nature of the job—first-class upholstering.—These men must be able to do all classes of upholstering from a common seat up to a parlor chair. This is all handwork; a very good class of work done in a quiet room amid pleasant surroundings. Most of the work is attached by means of tacks, or sewn, using long upholsterers' needles. Upholsterers are in good demand.

Training needed.—Training needed should be given in an upholstering house or car upholstering department.

Time to train.—Time to train would be four years, under union regulations, to make a first-class upholsterer. The work could be successfully learned in a much shorter time, if the workman had the opportunity of an open shop.

Work most closely related.—The work most closely related would be that of furniture or automobile upholsterer.

Experience needed.—Experience needed to make a first-class upholsterer in this shop is gained through working in the various classes from third class up to first class.

Disabilities—Lung wounds and lung diseases: The air and light are very good indeed. The work did not seem to be dusty. All articles which would contain dust have been cleaned by steam or vacuum process before they are passed over to the upholsterers to be either renovated or new upholstering applied. It is not hard work and requires but slight physical effort. Only a good, fair, steady gait of work is demanded.

Head: Ordinarily speaking the workman should have average intelligence. Faintness, dizziness, hesitant speech, or stammering will not in any way interfere with the carrying on of the work. All the work is done on one floor and no climbing is required.

Neck: Slight flexion of the neck is necessary. Most of the work is done while the head is looking down, similar to tailoring. Sometimes it is necessary to bend the head down, looking up under. This is more of a body movement than neck movement.

Ears: The workman may be entirely deaf and successfully carry on this work. However, due to the dangerous surroundings of the shops and yards, the workmen who are sent there should have sufficient hearing for personal safety.

Eyes: Average sight in one eye is ample for doing this work. Fine measurements or delicate fits are not required; merely a sense of proportion of finish which must be developed. That is, the article upholstered must be neat and tidy and appear well when done.

Shell shock: This seems to be an ideal class of work for a man who has shell shock, provided he is in condition to work.

Hernia, general debility, alimentary canal, kidneys, skin: Little physical effort is required. A man should be able to lift and turn over a chair and do sufficient pulling to get the upholstered surface taut. This is a sedentary occupation, but it is interesting and should be ideal for a man who has general debility, or minor disabilities of the alimentary canal or kidneys which are not too far developed so that they would interfere with his attendance at work.

Legs: Most of this work is done while sitting; therefore one or two artificial legs should not interfere with a man successfully making a livelihood at upholstering.

Arms: The workman must have full use of both arms, hands, and wrists, and free use of all his fingers.

Core making.

Number employed.—Eight.

Hours per week.—Fifty.

Rate of pay.—Thirty-nine cents per hour. It is possible to make 25 per cent additional, on bonus system. Cylinder core makers receive 41 cents per hour.

Nature of the job.—The core maker's job is making curious shaped biscuits, which are composed of sand, bran, and beer. This mass is mixed up like dough in a tub. All the patterns which come from the pattern making department which have curious shapes or holes, which are to be left in the inside when they are molded in the foundry, must be cored. The pattern maker, when building up his pattern, also makes the core boxes which go with the pattern. These core boxes go to the core makers. Usually they are wooden troughs. The troughs are filled with the core material and the contents of these troughs are emptied into pans which are run into core ovens and baked. This baking process turns them into a brick-like substance. Cores are usually made in two pieces. The core maker must even the surfaces which go together and bond them together with a paste after they are baked. These cores are then sent to the foundry department after they are numbered and designated. When the molder starts on his molding flask to mold up a pattern, he imbeds the pattern in molding sand, which has to be rammed down very hard, up to the parting surfaces on the pattern. All places where metal is not to flow within, the pattern surface must be filled by laying in a core. The other half of the flask is done the same way. The two parts of the flask are clamped together, leaving the core in place, before it is sent to the foundry, where hot metal is poured in. The action of the molten iron, steel, or brass further bakes the core and turns it into a very brittle substance, which is removed from the finished casting by simply pounding.

The work of the core makers is not heavy and very little education is required.

Time to train.—A man could be trained for a core maker in about six months.

Disabilities—Lung wounds and lung diseases: The lungs must be in good condition, since the foundry is more or less filled with gases.

Ears: Hearing in one ear is sufficient.

Eyes: Good use of one eye is sufficient.

Hernia: Hernia would not interfere with the carrying on of the work, provided a properly fitting truss is worn.

Legs: A man could get along with one injured or artificial leg.

Arms: It is necessary to have good use of both arms, hands, wrists, and average use of fingers.

In a great many factories this work is done by women, so that it is not very laborious.

The survey forms an important vocational study and a valuable contribution to the solving of the problem of the disabled soldier.

TRAINING OF WIDOWS OF DECEASED SOLDIERS IN GREAT BRITAIN.

In order that the widow may "add to her income where domestic needs make remunerative occupation desirable in her own interest or that of her children," provision has been made for her training along lines somewhat similar to those governing the training of soldiers disabled in the War. Article 14 of the Royal Warrant and Order in Council, dated March 29, 1917, which permits of this arrangement, reads as follows:

14. In addition to any pension and children's allowances awarded under the foregoing three articles there may be granted, under such conditions as the Minister of Pensions may determine: * * *

(3) To any widow an allowance not exceeding 12 s. 6 d. [$3.04] per week, for a period not ordinarily exceeding 13 weeks, whilst she is undergoing any course of instruction

which, in the opinion of the Minister of Pensions, will be advantageous to her. Where an allowance is granted under this subsection any fees for training, for which provision is not otherwise made, may be paid, subject to such conditions as the Minister of Pensions may determine.

Instructions have been issued to local war-pensions committees prescribing the conditions under which such training may be provided. The following are some of the provisions outlined in these instructions. The majority of widows, namely, those receiving minimum pensions under article 11 of the above-mentioned warrant, or alternative pensions under article 13, are eligible. Application for training is made to the Minister of Pensions through the local war-pensions committee of the applicant's district. The sanction of such application is dependent upon (1) the domestic circumstances of the applicant, (2) the suitability for the applicant of the occupation for which training is proposed, (3) the prospect of permanent and remunerative employment in the occupation chosen.

Maintenance allowance for widows undergoing training, in addition to the widow's pension and allowances, is sanctioned only under certain special circumstances, such as (1) the necessity of undertaking a remunerative occupation, (2) the necessity of maintaining her home while she is undergoing training, and (3) the necessity for provision for care of child or children at cost in excess of allowances ordinarily payable for such children.

In case the widow has a child or children under 16 years of age adequate provision must be made for their care, and in case the widow is obliged to live apart from her children the local committee arranges that they shall be visited at least once a month in order to ascertain that they are properly cared for.

At the end of the first month's training a report is made to the local committee by the instructor under whom instruction is given as to progress which has been made, and a similar report is made at the end of the period of training. Although the normal training period of three months contemplated by the warrant is sufficient for the less highly skilled occupations, the period is extended if the case justifies training in an occupation of a more highly skilled or of a professional character.

A careful inquiry has been made as to suitable trades for which training can be provided. Information has been gathered from Government departments, various firms, schools, and other institutions connected with the industries concerned. This information as published in schedule form in the War Pensions Gazette for January and February, 1918, includes data as to the period of instruction necessary, the facilities offered for training, the demand for workers, and the wages current in such occupations as box making, clock and watch repairing, cookery, corset making, dental mechanics, machin-

ing and blouse making, mantle trade, maternity nursing, midwifery, general nursing, school teaching, dressmaking, and hand ironing.

Because of the facility with which women can find work under the present abnormal conditions it is stated that relatively few have taken advantage of the opportunity offered, but it is reasonable to suppose that after-war conditions will increase the demand for such opportunities.

TRAINING AND EMPLOYMENT OF DISABLED SOLDIERS AND CIVILIANS IN GERMANY.

SETTLEMENT OF DISABLED SOLDIERS ON THE LAND.

The German National Committee for the Relief of Disabled Soldiers (*Reichsausschuss der Kriegsbeschädigtenfürsorge*) has issued the following "guiding principles" for dealing with the problem of settling disabled soldiers on the land after the War:[1]

The Settlement of Disabled Soldiers as Part of the General Scheme of Interior Colonization.

1. It having been suggested that settlements should be formed consisting solely of disabled soldiers and their families, the special committee for settlement and housing at its initial meeting on December 15, 1915, unanimously came to the conclusion that this plan was to be rejected, as it is one of the principles of the Disabled Soldiers' Welfare Association that every aggregation of disabled soldiers should be avoided, and this applies to land settlement, as to other things. Hence, disabled soldiers should be combined in not too large proportions with able-bodied settlers or attached individually or in small groups to existing settlements.

2. The settlement of disabled soldiers is to be viewed as a part only—though a very important part—of the general scheme of interior colonization. It can become effective only if the problem of interior colonization and urban housing is successfully handled on a large scale. It is thus to the interest of the disabled soldiers themselves that those doing welfare work in their behalf should devote all their energies to this latter object.

3. The settlement of disabled soldiers is justifiable in the first instance in their own home district, though by no means in that district only. Hence, the settlement of disabled soldiers is not a problem for this or that district, but for the Empire as a whole.

The Disabled Soldiers' Freedom of Choice and Claim to Settlement.

1. The object of all welfare work on behalf of disabled soldiers is to make them once again active and contented members of their community, with power to shape their own careers. Therefore, the disabled soldier who decides to become a settler must do so of his own free will and not under the spell of undue influence exercised by others, as in this case he can not have the proper feeling of responsibility or a sufficiently keen interest in his place of settlement. An emphatic note of warning must be raised against an excess of zeal, which may lead to a misapplied use of the arts of persuasion on unsuitable and reluctant subjects, and which on occasion may not even shrink from the making of promises which afterwards can not be fulfilled. The resulting disappointment is harmful both to the disabled soldiers and to their advisers. The proper course is to place before them without any exaggeration both the advan-

[1] Anstellungsnachrichten. Supplement. Berlin, Oct. 15, 1917.

tages and the difficulties of settling on the land and the financial means and personal qualities which are required to make a successful settler, and thus enable them to investigate whether such a course would be profitable in their case.

2. The idea that disabled soldiers can in any way claim settlement on the land as a right must be entirely dismissed. For one thing, the number of claims would in this way be so multiplied that there would not be enough land to go round, and, apart from this, the admission of such a right on the part of the soldiers would be incompatible with the necessity which the authorities will be under of making a selection among the applicants in the interest of the disabled soldiers themselves.

Settlement and Charity—Gifts of Land, Etc.

1. It is highly important that the work of settlement should not be carried out in a spirit of charity. It is true that the prospect of receiving gifts may induce the disabled soldiers to make up their minds more readily. But it will not endow them with any greater energy to persist in the face of the difficulties that will inevitably arise. If the settlement of disabled soldiers is to be a success, it must be carried through on strictly business, and not on eleemosynary, principles. Besides, should the settlement attain any dimensions at all, money gifts to the soldiers would soon come to an end through the limited amount available; covetousness would be aroused, and the real or imagined injustices which would inevitably arise in the distribution of money to settlers would create discontent among them. The disabled soldier has a right to be cared for and needs no charitable donations.

2. Nor must private third parties be allowed to draw upon the charity of the public for creating settlements of disabled soldiers. If any association wishes to furnish money for this object—a highly praiseworthy endeavor in itself—it must be referred to the State colonization officials, the chief welfare organizations, or the specially appointed settlement boards (land companies, building societies, etc.), as they are in the best position to judge where and in what way the sums available can be most profitably applied.

3. Where a welfare organization is in doubt whether to accept land which is offered as a gift by the owner—for instance, a real estate company for settlement purposes—it should decide in the negative whenever the donor has the ulterior object of profitably opening up the whole of his property or getting it settled more easily by making a gift of part of it, as it is by no means desirable that the settlement of disabled soldiers should be made an instrument for enriching private property owners. If, however, no such ulterior object exists, there can be no objection to the welfare organization accepting the offer of land, nor need it be made a condition that the donor should release the organization from all charges and fees which are entailed by the transfer of the property.

Personal Suitability of the Disabled Soldier and His Dependents—Settlement and Occupation.

1. The most important point to consider in the settlement of disabled soldiers is their personal qualifications, understood in the widest possible sense and including the physical capabilities still retained by the soldier in spite of his disablement, the qualifications of his wife, the physique and ages of his children, the amount of his military pensions and any other pensions, the size and situation of the plat required by him, his ability to furnish cash of his own—all these points (and they do not exhaust the list) must be duly weighed and considered in each individual case.

2. The greatest caution should be exercised in transplanting to the country townsmen who have not originated there, especially if their wives have not been brought up there either.

3. The qualifications of the wife and other members of the family become important and require to be carefully examined in proportion as the working capacity of the

disabled soldier has been impaired by his injury, since the holding will be the sole means of subsistence of the family, and he will have risked money of his own to acquire it.

4. The more the money-earning capacities of the family are independent of the small holding, the more important it is to consider whether the opportunities of earning money on the settlement, as judged by the qualifications of the settler, are adequate as regards extent, variety, and prospects of permanence.

5. Disabled soldiers who are competent and willing to become settlers should as far as possible receive training for their new occupation, even if they originate in the country. For this purpose the following objects should be kept in view:

(*a*) Bringing together of the prospective settlers in special hospitals in groups with slightly injured men, etc., establishment of agricultural schools for invalids, where possible in connection with the rural agricultural and winter schools.

(*b*) Instruction in special branches, horticulture, rearing of smaller animals, bee keeping, etc.

(*c*) Occasional sojourn on other farms, if possible in the neighborhood of existing settlements, procuring of housing accommodations (if possible with ground attached) in settlement colonies.

6. Useful advice tending to the material benefit of the settlers should be given to them wherever possible by the officials of agricultural or horticultural organizations, agricultural teachers, etc.

7. Every encouragement should be given to home work (winter spare time work) as a supplement to agricultural work; a separate department should be set up for this in the preparatory institutions mentioned above.

8. Where home work is the chief source of income for the disabled soldier caution must be exercised. This work can be done on a large scale, and without harmful social or economic consequences, only in noncommercial garden city societies with cooperative organization (small workshops connected with long-distance power stations, consumers' cooperative societies, etc.), and under expert direction and management.

Propaganda and Cooperation Between Welfare Societies and Settlement Societies.

The task of advising and assisting the disabled soldiers in the acquisition of their new means of livelihood naturally falls entirely on the welfare organizations. In the interests of the disabled soldiers, however, it would seem advisable that these organizations should seek the cooperation of bodies which have already had experience in the practical work of settlement in order to share with them the heavy responsibility involved in their task. To prevent friction, it is important that both bodies should have their sphere clearly defined. This cooperation will, of course, exhibit local diversities in the various parts of the country, but the following principles may be laid down as of general application:

1. To the chief welfare organizations will belong the task of stimulating settlement, i. e., of introducing disabled soldiers who are able and willing to become settlers to the offices which are engaged in the actual work of placing settlers, and which are, therefore, in a position to fulfill the demand for settlements.

2. On this account the chief welfare organizations must keep in close touch with the noncommercial land companies and building societies.

3. In addition to the noncommercial settlement societies and the municipalities and municipal officials who deal directly with the work of settlement there are to be considered among the organizations which promote the settlement of disabled soldiers also those purely business companies which in the matter of charges they make for settle-

ment (i. e., profit) submit themselves to the control and approval of the competent authorities.

4. The chief welfare organizations must not merely make isolated appeals to individuals, but through the agency of experts on the subject must conduct a systematic propaganda, and bring home the advantages of settlement to the disabled soldiers and their dependents. The issue involved is one of great social and economic importance, viz, to stem the flow of disabled soldiers to the large towns with their small tenements, and keep them on the land where they will be well housed. The cooperating boards can assist these endeavors by bearing part of the cost, by affording facilities for propaganda, by designating capable experts, etc.

5. For the proper conducting of propaganda, the following points are important:

(*a*) To centralize all propaganda work.

(*b*) To disseminate suitable literature among corporate bodies and administrative offices, especially such as come regularly into contact with disabled soldiers.

(*c*) To hold public meetings under the auspices and management of the corporate bodies mentioned under (*b*).

(*d*) To devote particular attention to the urban workers, who in some cases will be compelled in consequence of their injuries to seek a new means of livelihood.

6. The results of this campaign are to be reported, in each case, to the settlement societies cooperating with the disabled soldiers' welfare organization in the district in which the soldier in question wishes to settle; and the names of such are to be given to them.

7. The purely technical side of settlement is to be left wholly in the hands of the settlement societies, etc. The question whether any given individual is fitted to be a settler, where he is to settle, how large his holding is to be, and what capital he requires can best be decided by these societies, owing to their experience and their knowledge of local conditions and the requirements of settlement, though, of course, the welfare organizations can supply some preliminary details; and in any case, when it comes to the point, the wishes of the applicant, as stated above, are to be decisive.

8. The settlement of disabled soldiers will benefit the rural districts by bringing them an accession of trustworthy and energetic citizens. It will also further the cause of colonization in general, and help the municipalities to solve the question, which is so serious for them, of keeping people on the land. Hence there is every motive for inviting the municipalities to cooperate in the work of settling disabled soldiers.

Welfare organizations and settlement societies must therefore by united effort endeavor to secure the active support of communes and districts, and to induce them to bear a part of the labor and the expense, and to help in acquiring the land and raising the capital.

9. Hence it will be advisable for the large companies to assist in the formation of local settlement and building societies in suitable places, with the cooperation of the communes.

10. As a rule the disabled soldier, by concluding a settlement agreement with the societies, immediately secures a source of livelihood, on which alone he must rely for the future. Nevertheless, he remains subject to the disabled soldiers' welfare organization so long and in so far as his wound or sickness make this necessary and he himself expresses a desire for continued attention.

Financial Arrangements.

1. In the purchase of a holding the combined grants or the cash possessions of the disabled soldier must in all cases form the basis of the sum required. This much is demanded by one of the first principles of settlement, viz, that the man who acquires a holding must have invested something in it, so that he shall have an interest in its

development and progress. In other words, neglect of the holding must bring with it pecuniary loss to the owner and his family, if the initial difficulties are to be overcome and the settlement to be fairly set going. This rule, of which experience has shown the necessity, naturally applies to the larger holdings more than the smaller, but should be observed strictly in dealing with the latter also, save in case of necessity, and if there is exceptionally good security. The only exception—and that is more apparent than real—is formed by holdings on more or less uncultivated soil; here the owner acquires a keen interest in the soil on account of the labor which he and his family put into it. The settlement of disabled soldiers on waste land is, however, a somewhat risky proceeding, owing to the great physical strain which is imposed in such cases.

2. For raising additional money recourse is to be had in the first place, in Prussia, to the State credit to be provided by the royal annuity banks (*Rentenbanken*) according to the law of July 7, 1891. By the law of May 8, 1916, this credit is to be advanced to the extent of three-quarters of the value of the holdings, and in the case of small holdings up to as much as nine-tenths of the value.

3. Where applicants belong to the compulsorily insured class, the resources of the invalidity insurance institutes and salaried employees' insurance institutes can be brought into play throughout the Empire. The chief welfare organizations should particularly seek to establish a connection with the former of these, which command large resources and have always made the housing of workmen their special care. A good example of how cooperation can be effected between disabled soldiers' welfare organizations, settlement societies, communes, etc., on the one hand, and provincial insurance institutes on the other, is afforded by the Province of Silesia. Should difficulties arise, it would be well that the Imperial Government should impress upon the directors of the national insurance institutes the necessity of placing all available resources at the service of this important work.

4. The Imperial Government might further use its influence to increase the imperial housing fund in proportion as these resources are used particularly in the interests of disabled soldiers, even when these are not employees or workmen in the Government service.

5. Credit could also be obtained from some provincial banks and public savings banks, on which the Federal Government might, where necessary, exert a favorable influence. The obtaining of credit will be greatly facilitated by the assuming of guaranties on the part of the cooperating communes.

6. Credits will also be obtainable from private sources, especially rural loan banks (e. g., in Bavaria). Care must be taken, however, that the loan should take the form of a redeemable mortgage, not foreclosable by the creditor, with a moderate interest and a corresponding rate of redemption.

7. It will be necessary to create State funds from which to provide subsidies to free legal aid bureaus and agricultural societies, as also premiums for settling agricultural workers.

8. Settlement organizers, in choosing land for a colony, must always bear in mind that little or no expenditure is to be incurred for municipal, school, and church matters, or for subsequent agricultural arrangements.

9. Efforts should be made to induce the public credit institutions to lend money as freely as possible. Where the disabled soldier possesses some means of his own, the issue of third mortgages secured on these may in some cases be worth considering.

Security of Tenure for Disabled Soldiers Already Settled—Soldiers' Widows.

1. In view of the heavy indebtedness under which the small estates in the country have long labored, and the probable difficulty of obtaining mortgages after the war, especially second credit on landed property, there is a danger that a large number of

small proprietors who return home from the War disabled and physically enfeebled will be compelled to sell their estates.

2. Such sales would not be conducive to a sound system of land tenure; and the community owes it to the peasant proprietors and agricultural laborers who have been injured while fighting for it to maintain them in possession of their estates and holdings.

3. Hence, in settling disabled soldiers on the land it is necessary at the same time to make provision for maintaining this class of small proprietors in possession of their estates.

4. This provision is to be made by substituting for the present mortgages, with their high interest and right of foreclosure, real estate credit at low interest, not foreclosable, and with facilities for redemption.

5. Proposals to change existing tenures into Government leases (*Rentengüter*) for the purpose of reducing interest payments can be considered only in cases where it seems desirable to subdivide an existing estate by establishing on it one or more settlers' leaseholds.

6. The regulations for raising mortgages, where the disabled soldier is legally qualified to act for himself, are given in the Prussian law of June 26, 1912, for the area to which that law applies.

7. In many other cases where it is desirable to raise a mortgage it will be possible by capitalizing a part of the military pension in accordance with the law on the capitalization of pensions, using the sum thus obtained to pay a single premium to a life insurance society and by mortgaging the sum insured to create the necessary security for obtaining cheap credit from public institutions.

Where other guaranties besides the insurance policy can be furnished for the safeguarding of the mortgagee, these naturally will also be permissible.

8. It may be presumed that the competent rural cooperative societies will guarantee the payment of the interest on reasonable security. This fact will in itself be some guaranty that the capitalizing of the pensions will serve to maintain only those owners in possession of their estates who are capable of managing them efficiently in the future. It would be wrong to exercise any compulsion on the local cooperative societies that they should guarantee the payment of interest.

9. In cases where the life insurance policy method is not feasible to the landowner owing to his age, the policy may be made out in favor of his wife or one of his sons concurrently with the transference to them of the property.

10. The various governments must be asked to exempt from dues and stamp taxes all transactions connected with the settlement of accounts by a State supported settlers' bank.

11. The following bodies may be applied to for furnishing mortgage guaranties to be secured in the way mentioned above:

(*a*) The life insurance companies.

(*b*) The other corporate bodies, such as fire insurance companies, provincial banks, etc.

(*c*) The imperial insurance office for salaried employees.

(*d*) The public savings banks.

(*e*) As regards the small proprietors belonging to the working class, the State and provincial invalidity insurance institutes.

12. In the same way the widows of soldiers should be settled on the land, if they and their families possess the required qualifications. The pension capitalization law applies to them equally with the disabled soldiers.

EMPLOYMENT OF SEVERELY INJURED AND BLIND MEN ON MACHINE TOOLS.

In discussing this question the Frankfurter Zeitung[1] gives the following interesting particulars:

Engineer Perls, director of the Siemens-Schuckert Works in Berlin, has recently demonstrated that severely injured and blind men can be employed in the manufacture of small electrical fittings, with advantage both to the industry and to the worker himself.

As regards the severely injured, it has been made possible, for instance, for men who have badly injured arms and hands to work with the help of artificial arms, scar-protecting devices, turner's hand-rests, etc., as packers, smiths, and the like. Daily practice soon enables them to turn out a relatively large amount of work. It has naturally to be left to the technical staff or to the foreman to decide upon the kind of work which shall be given to these men, so that the best results may be obtained. This does not offer any great difficulty, especially in large modern factories where thousands of the same kind of articles are produced every day.

Attention is especially drawn to the fact that men who have lost a hand, a forearm, or even the whole arm, are still able to work with good results on the punch, stamping, and drilling machines. The same is true of men who have lost partly or entirely the use of their legs (loss of feet, lower segment of the leg, paralysis, etc.).

The problem of the employment of blind men is, of course, more complicated. Engineer Perls has discovered in the small fittings manufacturing works many articles which can be made by such men and for the making of which they may be allowed to work different kinds of machines.

The best use of blind soldiers in the electrical industry can be made by employing them in testing the exact dimensions of various articles. Articles of bulk production are supplied in large quantities to them. They pick them up one after another, fit them into a contrivance which has the exact dimensions of the articles to be tested, and according to the result of their examination place, say to the right, those which are of the required size, and to the left, those which are to be rejected. Other employments which do not require the use of machines are the packing of cartridge fuses in cardboard boxes, the examination of the contacts with the aid of a bell, etc.

For a long time past blind men have been fixing the bolts in fuse fittings with the aid of special machines. These contrivances can be erected in a very simple manner in any shop. As an example, the three screws of certain screw-contact pieces are fixed by blind men with the help of screw drivers projecting through the bench, and having its driving mechanism fixed under the same. The blind men,

[1] Frankfurter Zeitung. Frankfort on the Main, Sept. 6, 1917.

by feeling, put a screw on the top of each screw driver, place the part into which they have to be screwed over them and switch on the motor which drives the screw drivers. In the same way, with the help of a very simple device, working also through the bench, blind men are able to enlarge small coupling tubes.

The results obtained with blind men working on large machines are still more noteworthy. It has been proved that such men are able, after a very short time, to turn to exact dimensions, on a horizontal thread-cutting machine, small parts used in the production of bulk articles. The principal work to be given to blind men working drilling machines is to enlarge coupling tubes to a certain depth. This work is comparatively simple and does not necessitate any complicated special arrangement on the machines. It is, of course, absolutely necessary to take into account the fact that the work is to be performed by men who are deprived of their eyesight, and for this reason to take the necessary precautions so that the men can work on the machines without danger to themselves. In the work mentioned above the blind man is enabled to enlarge coupling tubes to the prescribed depth with the aid of a striker, which is fixed in such a manner on the machine that any pressing down of the lever further than is necessary is made impossible. By loosening the jaws which hold the coupling tube the finished article usually drops into a kind of funnel, and from there into a box. The system can be applied to horizontal as well as to perpendicular working machines. Drilling holes is done by putting the piece of metal in which the holes have to be drilled into special jigs, holding the piece to be drilled with the left hand and lowering the lever directing the drill with the right hand, till this action is automatically stopped by a striker.

If the necessary measures against accidents are taken, blind men are able to work, with the necessary degree of safety, on punching and stamping machines. In the punching process the pieces to be worked can only be introduced into the machine through one opening. With the help of stamping machines, for instance, blind men take a piece of flat iron sheet shaped like a Maltese cross and bend up the four projections so that the sheet forms a box. The machines are so arranged that they will perform work only if both hands are holding the switches. In the case of workmen who have lost either the right or the left arm this difficulty is overcome by the use of an artificial arm, or an arrangement is provided which sets the machine going by the use of one switch instead of two. The mechanically driven stamping machines used in the manufacture of bulk articles can also be worked by a movement of the foot. In such case it is necessary to protect the place where the machine is erected and where the stamping is done in such a manner that no accident can happen to the blind man's fingers, etc.

The above-mentioned kinds of work can be performed by blind people in a sitting position, and this position is preferable. It has been noticed, however, that some prefer to stand, as is the case with a blind man whose occupation consists in the turning of fuse pieces. He turns the fuse pieces in the ordinary manner, and then takes a file, with which he takes off the seam. This file, however, is provided with an extraordinarily simple device which facilitates its handling. The motor in this case is switched on with the help of the foot. The blind man is thus able to use his capacity for work to the fullest extent.

These and similar kinds of work for severely injured or even blind men deserve special consideration only because they are profitable not only to the men but also to the establishment that employs them. The Siemens-Schuckert Works pay a minimum wage of 35 pfennigs (8.3 cents) per hour to these men, regardless of their physical condition. This wage is paid with a view of encouraging apprentices to overcome the difficulties which they will undoubtedly encounter at the beginning. The management of the Siemens-Schuckert Works, as well as that of the Accumulator Works in Oberspree, both agree, however, upon the fact that the small losses incurred by the works during the period of apprenticeship of the injured soldiers are very soon recovered by the capacity for work of these men. The result is that the blind men employed in the small fittings workshops, for instance, very soon ask to be allowed to work on contract, which gives them after a short time a wage of 55 pfennigs (13.1 cents) an hour. At the same time the works have to incur some extra expenditure. The customary bringing up of material and taking it away is dispensed with. This, as a matter of fact, is not a drawback. It has already been urged by Taylor that in large modern factories all piece-workers should be provided with ample quantities of material within reach of their hands, and that the continual supply of material by assistants ought to be dispensed with. On the other hand, assistants are needed for oiling the machines and fitting the tools on them.

VOCATIONAL GUIDANCE ON PSYCHOLOGICAL PRINCIPLES.

The well-known German weekly for social reform, the Soziale Praxis, publishes in its issue of August 30, 1917, a summary by Dr. Otto Lipmann of the main points contained in a pamphlet recently written by him under the title, "Vocational guidance on a psychological basis: Its aims, principles, and methods." [1] A translation of the article follows:

The study of the psychological suitability of the individual for a particular vocation and the vocational guidance based on it has been

[1] "Psychologische Berufsberatung: Ziele, Grundlagen und Methoden," by Dr. Otto Lipmann. (Flugschriften der Zentralstelle für Volkswohlfahrt, No. 12.) Berlin, 1917.

going on in America for about a decade. Information concerning them reached Germany in connection with the efforts of Taylor and his school and stimulated German inquiry in this direction. While, however, the object of the "Taylor system" is to carry on working processes as economically as possible, the human material being taken for granted, the study of vocational suitability endeavors to take account as far as it can of the peculiarities both of the intending worker and of the vocation to be taken up before a choice is actually made. A great stimulus has been given to this study by the War, and the problems connected with it are engaging the attention of both employers and employed in increasing measure.

The problems dealt with by vocational guidance on a psychological basis crystallize round three interconnected questions: (1) The psychological characteristics of each vocation, (2) the selection of vocations for certain individuals, and (3) the selection of individuals for certain vocations.

Of descriptions of the psychological characteristics of single vocations already existing those of spinners and weavers by Bernays and of compositors by Hintze deserve first mention; they have been published by the Verein für Sozialpolitik under the title "Selection and adaptation of workers in the self-contained great industries" (*Auslese und Anpassung der Arbeiterschaft der geschlossenen Grossindustrie*). In his book "Psychology and economic life" (*Psychologie und Wirtschaftsleben*) Münsterberg has analyzed the vocational activities of the compositor, street car motorman, and the telephone operator, while Piorkowski has analyzed those of the compositor, motorman, shipping clerk, and the bookseller's clerk in "Psychological methodology of vocational aptitude" (*Beiträge zur psychologischen Methodologie der wirtschaftlichen Berufseignung*).

In attempting a more comprehensive analysis of as complete a list of vocations as possible one may proceed by selecting a number of easily definable psychological characteristics and then inquiring for what vocations they possess special importance. Thus Piorkowski distinguished among the "specialized" vocations those which require special attention and those which require reactions of special kinds, among the latter being all traffic occupations (street car and locomotive driving, aeroplane piloting, etc.). The specific quality demanded for the higher vocations is taken by Piorkowski to be the faculty of combination. Weigl, in discussing certain psychological qualities, such as apperceptive vision, liability to inattention, range of apperception, liability to suggestion, etc., has grouped together the vocations which appear to be specially dependent for their proper exercise on the presence or absence of each of these qualities; e. g., nonliability to inattention is important for typists, telephone operators, locomotive engineers, teachers, etc.

It is easy to see, however, that no complete psychological characterization of vocations can be reached by this method. Even if we invite those who are acquainted with the processes in question to characterize them from a psychological point of view as accurately as possible – as Freund of Leipzig suggests—we shall only get results worth having if we submit to the employers, workmen, foremen, teachers, etc., concerned a sufficiently comprehensive list of exactly formulated questions which can be answered by a simple "yes" or "no." A preliminary list of 105 such questions has been published by Dr. Lipmann and used as the basis of analyses of bookbinders', goldsmiths', and silversmiths' work, and of various forms of teachers' work. As an example of the kind of questions asked may be cited the questions which, according to Münsterberg, require an affirmative answer in the case of the telephone operator: "Does the exercise of this vocation require the ability to hear slight sounds, to recognize them quickly and distinguish them from others; to understand and interpret indistinct utterance correctly; to reproduce accurately after a short interval what has been once heard; to execute with certainty and gauge with accuracy movements of the arm of prescribed extent (aiming); to follow up different impressions by different prescribed movements correctly as required; to observe simultaneously several objects of the same sensory group throughout a prolonged period of time?"

A selection of suitable vocations for a certain individual is indicated in cases where an applicant comes to a vocational guidance bureau without any special wishes of his own and simply puts the question: "What work am I to take up?" If the advising official in answering this question wishes to take into consideration not merely the conomic situation and the physical qualities, but also the psychological characteristics of his client, there are three methods of procedure open to him: (1) He may make the applicant characterize himself by submitting to him a series of questions; (2) he may avail himself of the result of characterizations of the applicant by others; (3) he may himself submit the applicant to an experimental examination. The first method, which has been advocated by Parsons and others, appears to be in use in the Vocation Bureau of Boston, but does not seem to offer much prospect of useful results, especially in the case of juveniles. The last-named method has been employed by Weigl in Munich, but it is, of course, bound to be confined to a few characteristics and must therefore necessarily be supplemented by the second method. If the latter is properly carried out by competent observers who have studied the applicant throughly, it would seem to be the most promising, and as such should take precedence of the method of experimental examination as the principal method to be relied upon.

The persons who would appear prima facie to be best qualified to characterize any applicant are the teachers who have given him instruction at school; but, of course, they must be trained in psychological observation, and they must be directed to pay special attention to the qualities which are decisive factors in estimating aptitude for various vocations. Lists of such questions in the form of vocational psychological schedules have been lately published by Weigl in Munich, and by Hylla in Oberschöneweide (Berlin). If observational questionnaires of this description can be generally introduced in schools and the teachers instructed to fill them in with due care, the giving of vocational guidance on a psychological basis would be greatly facilitated, for it would then be possible for the advising official to recognize at once which vocational groups are likely to be suitable for the applicant and which he should be warned to avoid. Otherwise the question: "For what work am I suitable?" will only admit of a satisfactory answer in the exceptional case of conspicuous ability in one direction.

It is, of course, obvious that the choice of a vocation is often determined by other motives, e. g., economic, and interested motives, as well, and that in such case the applicant will put a much more definite question, such as "Can I become a printer?" This will always be the case when the application is made to the apprenticeship bureau of a particular employers' association, or even to some particular establishment. The task of the respective officials in this case is to select suitable persons for a particular vocation and conversely to keep unsuitable persons out of it. Here, again, more exact methods of determining suitability or nonsuitability may be employed, and these have already been systematized in certain cases. Thus Dück (Innsbruck) has dealt with the examination of electrical engineers, Münsterberg with that of motormen and telephone operators, Piorkowski and Moede with that of compositors, Stern with that of motormen, and Lewin, in cooperation with the author of the pamphlet under review, with that of compositors. In connection with this last-named examination, undertaken at the instance of the Berlin Master Printers' Association, the following facts were determined: (1) The number of errors and the amount of assistance required in reading an indistinct and incomplete text; (2) the number of errors in spelling long words; (3) the number of apperceptive acts in copying text; (4) the rate of speed in reading aloud, spelling, and copying; (5) the degree of skill acquired in typewriting after short practice—this last is a standard for measuring ability in the case of linotype compositors.

The author concludes his article by a sketch of the present state of the organization of research into the subject of vocational psychology in Germany. The first place, he says, is probably due to the

committee for vocational advice appointed by the National Welfare Center (*Zentralstelle für Volkswohlfahrt*) in Berlin, which has been responsible for the greater part of the essays quoted above. Next come the working associations founded by Stern in Hamburg and by Weigl in Munich, the work of Dück in Innsbruck, and the inquiries conducted at the instance of the military authorities by Moede and Piorkowski in Berlin. Stern also does a great deal of instructional work, and Weigl conducts elementary courses of psychology for advisory officials. These energetic efforts, adds Lipmann, are the more interesting in view of the fact that the difficulties are particularly great at the present moment; no employer is in a position to pick and choose his labor according to suitability, but he takes whatever he can get. On the other hand, it is our obvious duty to prepare for the changes which will be involved by the transition from war to peace, and for this reason it is imperative that research should continue to develop even during the war. For such development, however, research should be systematically coordinated and centralized and the active cooperation both of employers and employed is desirable. Pecuniary assistance for such research may possibly be obtained from employers in the war industries. At any rate, all money spent on this object will bear fruit a thousandfold to the national welfare.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

According to reports received from retail dealers by the Bureau of Labor Statistics, the price of food as a whole shows an increase of 1 per cent during the month from January 15 to February 15, 1918.

Of the 16 articles for which relative prices are shown, 3 decreased in price, 5 remained the same, and 8 increased in price. Eggs declined 9 per cent, pork chops 2 per cent, and bacon 1 per cent. Milk, bread, flour, corn meal, and potatoes are the articles that show no price change. Sugar shows the greatest increase, being 12 per cent higher on February 15 than on January 15. Hens increased 10 per cent, round steak 3 per cent, sirloin steak, chuck roast, and butter 2 per cent each, and ham 1 per cent The increase in the price of lard was less than 1 per cent.

The following table shows the course of prices in the United States in January and February, 1918:

AVERAGE MONEY RETAIL PRICES, AND RELATIVE RETAIL PRICES OF FOOD ON JAN. 15, 1918, AND FEB. 15, 1918.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913.]

Article.	Unit.	Average money price.		Relative price.	
		Jan. 15, 1918.	Feb. 15, 1918.	Jan. 15, 1918.	Feb. 15, 1918
Sirloin steak	Pound	$0.327	$0.334	129	131
Round steak	do	.306	.314	137	141
Rib roast	do	.258	.263	130	133
Chuck roast	do	.221	.227		
Plate beef	do	.172	.177		
Pork chops	do	.343	.336	163	160
Bacon	do	.486	.484	180	179
Ham	do	.436	.438	162	163
Lard	do	.329	.330	208	209
Hens	do	.329	.362	154	170
Salmon, canned	do	.292	.291		
Eggs	Dozen	.674	.611	195	177
Butter	Pound	.567	.579	148	151
Cheese	do	.345	.349		
Milk	Quart	.134	.134	151	151
Bread	16-oz. loaf[1]	.083	.083	166	166
Flour	Pound	.066	.066	200	200
Corn meal	do	.070	.070	233	233
Rice	do	.117	.118		
Potatoes	do	.032	.032	188	188
Onions	do	.050	.049		
Beans, navy	do	.185	.181		
Prunes	do	.164	.165		
Raisins, seeded	do	.150	.150		
Sugar	do	.095	.106	173	193
Coffee	do	.304	.304		
Tea	do	.623	.609		
All articles combined				160	161

[1] 16 ounces, weight of dough.

In the year from February 15, 1917 to February 15, 1918, the price of food as a whole in the United States advanced 21 per cent. The

only article that was lower in price in February, 1918, than in February, 1917, was potatoes. This article shows a decrease of 35 per cent. During the year corn meal increased 71 per cent; bacon, 57 per cent; and lard, 51 per cent. Other articles showing an increase of more than 25 per cent are: Ham, 38 per cent; hens and milk, 35 per cent each; sugar, 30 per cent; and pork chops, 28 per cent. All the other articles increased in price from 17 per cent, as in the case of sirloin steak, rib roast, bread, and flour, to 24 per cent in the case of butter.

From February, 1913, to February, 1918, food as a whole shows an increase of 66 per cent. Every article shows an increase in price of 40 per cent or more. Corn meal increased 138 per cent; lard, 113 per cent; potatoes, 109 per cent; and flour, 100 per cent. Nine articles—milk, round steak, bread, ham, hens, pork chops, bacon, sugar, and eggs—show increases ranging from 51 per cent for milk to 95 per cent for eggs. The least price changes are shown by sirloin steak, rib roast, and butter. Each of these increased 40 per cent.

The table which follows gives the average and relative retail prices in February of each year from 1913 to 1918:

AVERAGE MONEY PRICES AND RELATIVE RETAIL PRICES OF FOOD ON FEB. 15 OF EACH YEAR, 1913 TO 1918, INCLUSIVE.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913.]

Article.	Unit.	Average money price, Feb. 15—						Relative price, Feb. 15—					
		1913	1914	1915	1916	1917	1918	1913	1914	1915	1916	1917	1918
Sirloin steak	Lb.	$0.240	$0.254	$0.248	$0.257	$0.287	$.334	94	99	98	101	113	131
Round steak	Lb.	.206	.228	.223	.228	.260	.314	93	102	100	102	117	141
Rib roast	Lb.	.189	.199	.197	.201	.225	.263	95	101	100	102	114	133
Chuck roast	Lb.	.....	.169	.162	.162	.186	.227	.....	.....	.....	.....	.....	.....
Plate beef	Lb.	.....	.124	.123	.122	.141	.177	.....	.....	.....	.....	.....	.....
Pork chops	Lb.	.188	.209	.179	.193	.261	.336	90	100	85	92	125	160
Bacon	Lb.	.255	.264	.267	.273	.307	.484	95	98	99	101	114	179
Ham	Lb.	.253	.265	.259	.297	.318	.438	94	99	96	110	118	163
Lard	Lb.	.154	.158	.152	.177	.219	.330	98	99	97	112	138	209
Hens	Lb.	.208	.222	.208	.222	.267	.362	97	104	97	104	126	170
Salmon, canned	Lb.	.....	.....	.198	.200	.216	.291	.....	.....	.....	.....	.....	.....
Eggs	Doz.	.315	.364	.338	.349	.506	.611	91	106	98	101	147	177
Butter	Lb.	.414	.359	.378	.378	.469	.579	108	93	98	99	122	151
Cheese	Lb.	.....	.....	.235	.243	.315	.349	.....	.....	.....	.....	.....	.....
Milk	Qt.	.089	.091	.089	.089	.100	.134	100	102	100	100	112	151
Bread	16 oz.[1]	.050	.055	.063	.062	.071	.083	100	110	126	124	142	166
Flour	Lb.	.033	.032	.045	.041	.056	.066	100	99	138	125	171	200
Corn meal	Lb.	.030	.031	.033	.033	.041	.070	98	103	110	108	136	233
Rice	Lb.	.....	.....	.091	.091	.091	.118	.....	.....	.....	.....	.....	.....
Potatoes	Lb.	.016	.019	.015	.025	.051	.032	90	108	84	141	290	188
Onions	Lb.	.....	.....	.034	.044	.122	.049	.....	.....	.....	.....	.....	.....
Beans, navy	Lb.	.....	.....	.076	.092	.149	.181	.....	.....	.....	.....	.....	.....
Prunes	Lb.	.....	.....	.137	.133	.141	.165	.....	.....	.....	.....	.....	.....
Raisins, seeded	Lb.	.....	.....	.125	.126	.141	.150	.....	.....	.....	.....	.....	.....
Sugar	Lb.	.055	.051	.064	.068	.081	.106	100	94	118	125	148	193
Coffee	Lb.	.....	.....	.299	.299	.299	.304	.....	.....	.....	.....	.....	.....
Tea	Lb.	.....	.....	.546	.546	.546	.609	.....	.....	.....	.....	.....	.....
All articles combined		.....	.....	.....	.....	.....	.....	97	101	101	106	133	161

[1] Loaf; 16 ounces, weight of dough.

The two tables which follow give average retail prices for 29 articles in 44 cities.

For 15 of the larger cities, average prices are shown in the following table for January, 1918, and for February, 1913, 1914, 1917, and 1918. No prices are givenn for Atlanta, Ga., as less than 80 per cent of the grocers and butchers of that city sent in their reports for February, 1918, to the bureau.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES ON FEB. 15, 1913, 1914, 1917, AND 1918, AND JAN. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.	Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.
		1913	1914	1917			1913	1914	1917		
Sirloin steak	Pound	(1)	(1)	(1)	(1)	(1)	$0.207	$0.234	$0.274	$0.327	$0.334
Round steak	do	(1)	(1)	(1)	(1)	(1)	.190	.222	.260	.315	.329
Rib roast	do	(1)	(1)	(1)	(1)	(1)	.173	.180	.218	.267	.255
Chuck roast	do	(1)	(1)	(1)	(1)	(1)	.147	.152	.180	.231	.237
Plate beef	do	(1)	(1)	(1)	(1)	(1)	.....	.133	.150	.183	.186
Pork chops	do	(1)	(1)	(1)	(1)	(1)	.173	.188	.252	.348	.344
Bacon, sliced	do	(1)	(1)	(1)	(1)	(1)	.213	.230	.268	.450	.449
Ham, sliced	do	(1)	(1)	(1)	(1)	(1)	.300	.290	.350	.491	.479
Lard	do	(1)	(1)	(1)	(1)	(1)	.135	.145	.210	.332	.326
Lamb	do	(1)	(1)	(1)	(1)	(1)	.180	.180	.270	.327	.332
Hens	do	(1)	(1)	(1)	(1)	(1)	.198	.228	.280	.351	.403
Salmon, canned	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.173	.262	.261
Eggs, strictly fresh	Dozen	(1)	(1)	(1)	(1)	(1)	.271	.352	.497	.741	.655
Eggs, storage	do	(1)	(1)	(1)	(1)	(1)	.230	.320	.....	.541	.499
Butter	Pound	(1)	(1)	(1)	(1)	(1)	.423	.377	.493	.591	.604
Cheese	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.325	.355	.357
Milk	Quart	(1)	(1)	(1)	(1)	(1)	.083	.087	.092	.130	.130
Bread	16-oz. loaf[2]	(1)	(1)	(1)	(1)	(1)	.048	.049	.066	.075	.077
Flour	Pound	(1)	(1)	(1)	(1)	(1)	.032	.032	.056	.066	.067
Corn meal	do	(1)	(1)	(1)	(1)	(1)	.024	.025	.034	.061	.060
Rice	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.098	.115	.115
Potatoes	do	(1)	(1)	(1)	(1)	(1)	.017	.018	.053	.036	.036
Onions	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.125	.051	.049
Beans, navy	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.147	.186	.182
Prunes	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.127	.166	.166
Raisins	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.130	.153	.151
Sugar	do	(1)	(1)	(1)	(1)	(1)	.050	.047	.075	.094	.090
Coffee	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.235	.277	.282
Tea	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.550	.653	.644
		Boston, Mass.					Buffalo, N. Y.				
Sirloin steak	Pound	$0.345	$0.329	$0.408	$0.426	$0.424	$0.203	$0.215	$0.263	$0.314	$0.321
Round steak	do	.324	.341	.385	.427	.430	.183	.192	.235	.292	.299
Rib roast	do	.234	.240	.278	.303	.303	.170	.168	.200	.250	.253
Chuck roast	do	.170	.178	.230	.253	.254	.147	.155	.178	.223	.230
Plate beef	do	.....	.....	.....	.....	.....	.....	.118	.148	.175	.179
Pork chops	do	.206	.226	.278	.350	.345	.193	.205	.288	.354	.321
Bacon, sliced	do	.246	.250	.300	.459	.460	.203	.207	.260	.443	.438
Ham, sliced	do	.283	.314	.358	.465	.460	.240	.250	.343	.451	.448
Lard	do	.153	.156	.223	.334	.335	.139	.142	.200	.319	.318
Lamb	do	.218	.217	.291	.334	.333	.175	.164	.240	.291	.294
Hens	do	.228	.244	.297	.349	.380	.200	.224	.275	.328	.360
Salmon, canned	do	.....	.....	.206	.302	.308	.....	.....	.178	.286	.286
Eggs, strictly fresh	Dozen	.375	.453	.603	.791	.748	.310	.356	.550	.718	.690
Eggs, storage	do	.252	.358	.470	.541	.590	.222	.305	.467	.526	.573
Butter	Pound	.389	.367	.454	.544	.560	.412	.339	.457	.570	.585
Cheese	do	.....	.....	.294	.332	.336	.....	.....	.300	.336	.342
Milk	Quart	.089	.089	.105	.145	.145	.080	.080	.100	.140	.140
Bread	16-oz. loaf[2]	.052	.053	.068	.078	.076	.050	.046	.073	.083	.078
Flour	Pound	.037	.037	.061	.074	.073	.029	.030	.053	.062	.063
Corn meal	do	.035	.036	.047	.077	.079	.025	.026	.039	.077	.075
Rice	do	.....	.....	.097	.120	.122	.....	.....	.093	.119	.121
Potatoes	do	.017	.021	.063	.037	.038	.014	.017	.053	.031	.031
Onions	do	.....	.....	.120	.057	.054	.....	.....	.129	.054	.053
Beans, navy	do	.....	.....	.152	.188	.186	.....	.....	.142	.193	.186
Prunes	do	.....	.....	.147	.267	.170	.....	.....	.132	.169	.172
Raisins	do	.....	.....	.142	.148	.150	.....	.....	.122	.140	.141
Sugar	do	.054	.051	.079	.099	.098	.053	.050	.078	.097	.097
Coffee	do	.....	.....	.346	.346	.341	.....	.....	.285	.300	.306
Tea	do	.....	.....	.600	.617	.631	.....	.....	.475	.555	.567

[1] Prices not shown; less than 80 per cent of reports for February, 1918, received by bureau.
[2] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES ON FEB. 15, 1913, 1914, 1917, AND 1918, AND JAN. 15, 1918—Continued.

Article.	Unit.	Chicago, Ill.					Cleveland, Ohio.				
		Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.	Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.
		1913	1914	1917			1913	1914	1917		
Sirloin steak	Pound	$0.209	$0.241	$0.273	$0.302	$0.304	$0.223	$0.249	$0.282	$0.302	$0.316
Round steak	do	.186	.211	.236	.273	.272	.188	.223	.252	.288	.299
Rib roast	do	.181	.193	.228	.254	.251	.180	.200	.223	.244	.252
Chuck roast	do	.139	.156	.176	.212	.214	.147	.170	.197	.224	.236
Plate beef	do	.....	.118	.137	.164	.166	.....	.123	.142	.168	.177
Pork chops	do	.163	.187	.250	.316	.301	.183	.214	.285	.331	.326
Bacon, sliced	do	.290	.303	.336	.498	.499	.243	.276	.319	.470	.477
Ham, sliced	do	.295	.310	.354	.428	.448	.320	.335	.365	.456	.455
Lard	do	.147	.150	.206	.318	.317	.158	.164	.227	.316	.322
Lamb	do	.191	.197	.252	.306	.306	.187	.187	.286	.301	.311
Hens	do	.194	.194	.264	.304	.352	.306	.226	.299	.338	.373
Salmon, canned	do	.....	.....	.243	.303	.303	.....	.....	.197	.282	.281
Eggs, strictly fresh	Dozen	.273	.329	.503	.651	.593	.318	.362	.581	.725	.702
Eggs, storage	do	.226	.....	.440	.534	.530	.....	.....	.....	.524	.593
Butter	Pound	.399	.329	.466	.544	.547	.436	.362	.518	.571	.578
Cheese	do	.....	.....	.329	.375	.377	.....	.....	.313	.338	.342
Milk	Quart	.080	.080	.090	.119	.119	.088	.080	.100	.130	.130
Bread	16-oz. loaf[1]	.054	.054	.073	.080	.084	.049	.050	.070	.079	.078
Flour	Pound	.028	.029	.051	.061	.063	.032	.032	.061	.068	.068
Corn meal	do	.029	.029	.041	.070	.069	.028	.029	.041	.072	.069
Rice	do	.....	.....	.094	.120	.121	.....	.....	.092	.119	.121
Potatoes	do	.012	.017	.050	.028	.029	.014	.019	.055	.030	.031
Onions	do	.....	.....	.129	.045	.046	.....	.....	.138	.048	.048
Beans, navy	do	.....	.....	.153	.185	.185	.....	.....	.152	.181	.177
Prunes	do	.....	.....	.140	.162	.165	.....	.....	.140	.171	.172
Raisins	do	.....	.....	.150	.150	.151	.....	.....	.139	.146	.146
Sugar	do	.050	.050	.074	.084	.087	.055	.052	.081	.096	.094
Coffee	do	.....	.....	.300	.283	.282	.....	.....	.288	.289	.291
Tea	do	.....	.....	.550	.593	.591	.....	.....	.475	.599	.580
		Denver, Colo.					Detroit, Mich.				
Sirloin steak	Pound	$0.225	$0.243	$0.235	$0.292	$0.303	$0.228	$0.256	$0.260	$0.318	$0.321
Round steak	do	.184	.207	.213	.276	.282	.182	.210	.228	.285	.298
Rib roast	do	.159	.174	.191	.225	.236	.182	.202	.228	.251	.259
Chuck roast	do	.145	.158	.164	.203	.209	.145	.154	.174	.210	.224
Plate beef	do	.....	.100	.105	.148	.151	.....	.117	.130	.167	.177
Pork chops	do	.165	.186	.236	.333	.325	.168	.184	.242	.333	.331
Bacon, sliced	do	.263	.270	.317	.518	.483	.224	.233	.270	.458	.457
Ham, sliced	do	.270	.292	.333	.467	.475	.240	.280	.233	.423	.426
Lard	do	.163	.163	.221	.342	.341	.159	.161	.208	.329	.336
Lamb	do	.155	.154	.218	.289	.292	.167	.166	.226	.313	.324
Hens	do	.200	.201	.225	.305	.338	.200	.216	.270	.342	.375
Salmon, canned	do	.....	.....	.194	.276	.279	.....	.....	.195	.286	.274
Eggs, strictly fresh	Dozen	.290	.336	.438	.612	.600	.312	.374	.543	.726	.668
Eggs, storage	do	.....	.250	.400	.509	.483	.248	.320	.....	.528	.550
Butter	Pound	.400	.343	.388	.543	.560	.404	.349	.468	.556	.568
Cheese	do	.....	.....	.325	.358	.361	.....	.....	.305	.338	.343
Milk	Quart	.084	.084	.083	.115	.115	.088	.089	.110	.140	.140
Bread	16-oz. loaf[1]	.047	.048	.075	.086	.087	.050	.050	.073	.077	.075
Flour	Pound	.027	.025	.046	.054	.054	.032	.031	.055	.062	.065
Corn meal	do	.025	.025	.032	.059	.056	.027	.028	.044	.077	.077
Rice	do	.....	.....	.092	.115	.116	.....	.....	.086	.118	.121
Potatoes	do	.011	.015	.052	.022	.022	.013	.016	.054	.029	.029
Onions	do	.....	.....	.106	.047	.044	.....	.....	.121	.053	.055
Beans, navy	do	.....	.....	.138	.177	.174	.....	.....	.150	.179	.182
Prunes	do	.....	.....	.138	.166	.171	.....	.....	.129	.168	.171
Raisins	do	.....	.....	.131	.147	.153	.....	.....	.128	.138	.141
Sugar	do	.054	.050	.079	.089	.090	.051	.050	.079	.087	.089
Coffee	do	.....	.....	.288	.300	.300	.....	.....	.275	.298	.304
Tea	do	.....	.....	.488	.575	.575	.....	.....	.450	.544	.573

[1] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES ON FEB. 15, 1913, 1914, 1917, AND 1918, AND JAN. 15, 1918—Continued.

Article.	Unit.	Milwaukee, Wis.					New York, N. Y.				
		Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.	Feb. 15—			Jan. 15. 1918.	Feb. 15, 1918.
		1913	1914	1917			1913	1914	1917		
Sirloin steak	Pound	$0.205	$0.236	$0.254	$0.298	$0.302	$0.247	$0.257	$0.298	$0.344	$0.347
Round steak	do	.185	.216	.236	.284	.287	.231	.255	.292	.352	.356
Rib roast	do	.173	.188	.205	.245	.248	.211	.218	.247	.294	.295
Chuck roast	do	.150	.164	.183	.225	.227	.151	.162	.188	.236	.237
Plate beef	do	.....	.117	.134	.167	.171	.....	.148	.160	.221	.220
Pork chops	do	.153	.178	.248	.321	.306	.198	.218	.276	.348	.349
Bacon, sliced	do	.263	.274	.313	.489	.479	.231	.250	.288	.462	.459
Ham, sliced	do	.268	.278	.324	.451	[1] .452	[1] .186	[1] .193	[1] .239	[1] .328	[1] .336
Lard	do	.151	.157	.226	.319	.326	.157	.156	.223	.330	.331
Lamb	do	.195	.190	.267	.312	.323	.165	.161	.234	.281	.283
Hens	do	.188	.194	.258	.304	.326	.204	.217	.273	.326	.365
Salmon, canned	do	.....	.....	.227	.278	.272	.....	.....	.254	.355	.350
Eggs, strictly fresh	Dozen	.290	.347	.493	.630	.635	.380	.437	.591	.808	.697
Eggs, storage	do	.220	.....	.445	.491	.539	.260	.353	.450	.536	.580
Butter	Pound	.402	.332	.474	.544	.551	.415	.363	.492	.574	.582
Cheese	do	.....	.....	.313	.335	.348	.....	.....	.305	.344	.345
Milk	Quart	.070	.070	.080	.110	.110	.090	.090	.109	.150	.146
Bread	16-oz. loaf[2]	.050	.051	.076	.075	.075	.053	.054	.072	.078	.077
Flour	Pound	.031	.030	.055	.062	.065	.032	.032	.057	.070	.071
Corn meal	do	.033	.033	.050	.071	.075	.034	.034	.051	.082	.080
Rice	do	.....	.....	.095	.118	.121	.....	.....	.091	.118	.117
Potatoes	do	.012	.016	.050	.027	.029	.025	.025	.059	.043	.044
Onions	do	.....	.....	.131	.048	.047	.....	.....	.140	.052	.052
Beans, navy	do	.....	.....	.150	.190	.186	.....	.....	.150	.185	.183
Prunes	do	.....	.....	.152	.158	.166	.....	.....	.139	.168	.169
Raisins	do	.....	.....	.143	.151	.148	.....	.....	.134	.151	.149
Sugar	do	.054	.053	.078	.086	.086	.049	.045	.076	.097	.091
Coffee	do	.....	.....	.283	.261	.268	.....	.....	.265	.267	.267
Tea	do	.....	.....	.540	.595	.589	.....	.....	.460	.541	.536

Article.	Unit.	Philadelphia, Pa.					Pittsburgh, Pa.				
Sirloin steak	Pound	$0.283	$0.300	$0.339	$0.387	$0.401	$0.248	$0.275	$0.307	$0.360	$0.377
Round steak	do	.234	.257	.307	.360	.376	.214	.232	.272	.332	.351
Rib roast	do	.214	.221	.252	.296	.303	.206	.213	.248	.272	.290
Chuck roast	do	.165	.180	.215	.253	.258	.156	.170	.197	.239	.256
Plate beef	do	.....	.119	.143	.183	.192	.....	.128	.141	.175	.192
Pork chops	do	.191	.219	.279	.372	.363	.200	.225	.288	.356	.333
Bacon, sliced	do	.234	.254	.306	.468	.470	.272	.291	.311	.505	.501
Ham, sliced	do	.290	.296	.375	.488	.488	.290	.294	.359	.470	.478
Lard	do	.144	.151	.214	.336	.334	.151	.156	.219	.334	.332
Lamb	do	.186	.194	.268	.314	.324	.215	.208	.298	.345	.347
Hens	do	.213	.235	.287	.338	.361	.253	.272	.338	.388	.436
Salmon, canned	do	.....	.....	.193	.266	.265	.....	.....	.217	.305	.305
Eggs, strictly fresh	Dozen	.301	.380	.560	.741	.690	.292	.375	.548	.747	.697
Eggs, storage	do	.240	.295	.425	.529	.553	.250	.330	.....	.539	.527
Butter	Pound	.471	.399	.545	.624	.630	.431	.378	.496	.586	.591
Cheese	do	.....	.....	.326	.362	.374	.....	.....	.316	.352	.357
Milk	Quart	.080	.080	.090	.135	.130	.088	.092	.103	.137	.138
Bread	16-oz. loaf[2]	.043	.043	.062	.071	.071	.048	.048	.070	.082	.086
Flour	Pound	.032	.031	.057	.071	.072	.031	.031	.056	.070	.069
Corn meal	do	.028	.028	.040	.071	.073	.027	.029	.045	.088	.085
Rice	do	.....	.....	.097	.128	.130	.....	.....	.095	.119	.121
Potatoes	do	.021	.024	.062	.039	.039	.016	.019	.058	.033	.037
Onions	do	.....	.....	.149	.055	.052	.....	.....	.134	.051	.050
Beans, navy	do	.....	.....	.146	.187	.186	.....	.....	.160	.197	.190
Prunes	do	.....	.....	.143	.165	.168	.....	.....	.134	.172	.175
Raisins	do	.....	.....	127	.140	.140	.....	.....	.147	.146	.149
Sugar	do	.049	.045	.081	.096	.092	.058	.054	.089	.099	.098
Coffee	do	.....	.....	.285	.272	.278	.....	.....	.281	.302	.299
Tea	do	.....	.....	.544	.576	.596	.....	.....	.571	.727	.728

[1] Whole.

[2] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES ON FEB. 15, 1913, 1914, 1917, AND 1918, AND JAN. 15, 1918—Concluded.

Article.	Unit.	St. Louis, Mo.					San Francisco, Cal.				
		Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.	Feb. 15—			Jan. 15, 1918.	Feb. 15, 1918.
		1913	1914	1917			1913	1914	1917		
Sirloin steak	Pounds	$0.228	$0.268	$0.275	$0.300	$0.300	$0.203	$0.210	$0.234	$0.243	$0.264
Round steak	do	.204	.242	.259	.296	.297	.190	.197	.227	.237	.258
Rib roast	do	.176	.204	.210	.257	.261	.207	.220	.228	.235	.249
Chuck roast	do	.142	.157	.175	.215	.213	.146	.155	.162	.173	.191
Plate beef	do	.....	.173	.135	.172	.171	.....	.150	.156	.166	.182
Pork chops	do	.171	.186	.250	.303	.293	.230	.250	.280	.361	.351
Bacon, sliced	do	.230	.250	.300	.500	.478	.328	.339	.375	.535	.535
Ham, sliced	do	.267	.275	.316	.457	.458	.300	.320	.400	.489	.494
Lard	do	.132	.127	.193	.286	.293	.176	.174	.228	.336	.334
Lamb	do	.178	.173	.262	.306	.302	.172	.183	.243	.282	.293
Hens	do	.174	.203	.240	.301	.347	.238	.248	.287	.375	.418
Salmon, canned	do	.....	.....	.191	.285	.288	.....	.....	.196	.257	.254
Eggs, strictly fresh	Dozen	.244	.319	.482	.684	.573	.250	.289	.390	.710	.489
Eggs, storage	do	.200	.....	.....	.525	.495	.....	.336	.....	.488	.383
Butter	Pound	.404	.352	.481	.581	.580	.407	.....	.433	.602	.589
Cheese	do	.....	.....	.307	.352	.365	.....	.....	.267	.335	.329
Milk	Quart	.080	.088	.095	.130	.130	.100	.100	.100	.121	.121
Bread	16-oz loaf[1]	.049	.050	.076	.088	.088	.051	.052	.063	.085	.084
Flour	Pound	.030	.028	.051	.061	.061	.033	.034	.051	.062	.062
Corn meal	do	.021	.026	.035	.059	.062	.034	.034	.044	.071	.069
Rice	do	.....	.....	.086	.112	.111	.....	.....	.088	.119	.119
Potatoes	do	.015	.018	.050	.030	.031	.015	.018	.047	.027	.023
Onions	do	.....	.....	.132	.046	.044	.....	.....	.123	.033	.034
Beans, navy	do	.....	.....	.147	.179	.179	.....	.....	.146	.162	.158
Prunes	do	.....	.....	.138	.167	.167	.....	.....	.124	.142	.142
Raisins	do	.....	.....	.149	.165	.169	.....	.....	.135	.138	.128
Sugar	do	.051	.048	.076	.087	.087	.053	.052	.075	.086	.087
Coffee	do	.....	.....	.237	.274	.274	.....	.....	.317	.309	.301
Tea	do	.....	.....	.543	.650	.652	.....	.....	.517	.539	.543
		Seattle, Wash.					Washington, D. C.				
Sirloin steak	Pound	$0.220	$0.240	$0.238	$0.275	$0.300	$0.259	$0.275	$0.300	$0.370	$0.380
Round steak	do	.200	.209	.224	.256	.285	.218	.234	.282	.351	.360
Rib roast	do	.184	.194	.210	.223	.251	.200	.213	.243	.288	.296
Chuck roast	do	.150	.151	.166	.195	.214	.156	.170	.204	.254	.257
Plate beef	do	.....	.128	.125	.162	.183	.....	.124	.162	.195	.202
Pork chops	do	.234	.240	.268	.388	.388	.193	.210	.286	.381	.378
Bacon, sliced	do	.300	.321	.334	.534	.535	.233	.243	.292	.488	.485
Ham, sliced	do	.292	.300	.330	.464	.468	.282	.286	.325	.472	.473
Lard	do	.179	.162	.219	.327	.327	.144	.148	.214	.336	.336
Lamb	do	.183	.187	.254	.315	.327	.210	.207	.296	.357	.346
Hens	do	.243	.247	.270	.341	.359	.213	.226	.290	.350	.391
Salmon, canned	do	.....	.....	.211	.285	.283	.....	.....	.180	.283	.287
Eggs, strictly fresh	Dozen	.300	.366	.407	.595	.528	.263	.356	.538	.813	.671
Eggs, storage	do	.225	.....	.....	.475	.475	.205	.....	.....	.584	.617
Butter	Pound	.426	.397	.466	.587	.588	.440	.376	.496	.600	.605
Cheese	do	.....	.....	.278	.306	.308	.....	.....	.316	.355	.357
Milk	Quart	.091	.095	.100	.126	.126	.090	.090	.100	.140	.140
Bread	16-oz. loaf[1]	.048	.051	.080	.087	.087	.049	.050	.071	.076	.074
Flour	Pound	.030	.029	.047	.059	.058	.037	.037	.056	.070	.069
Corn meal	do	.031	.033	.040	.073	.072	.025	.025	.032	.066	.063
Rice	do	.....	.....	.087	.108	.117	.....	.....	.096	.125	.127
Potatoes	do	.009	.013	.038	.019	.017	.015	.019	.053	.035	.036
Onions	do	.....	.....	.097	.041	.042	.....	.....	.136	.051	.050
Beans, navy	do	.....	.....	.144	.177	.168	.....	.....	.152	.200	.196
Prunes	do	.....	.....	.130	.143	.146	.....	.....	.150	.174	.175
Raisins	do	.....	.....	.131	.149	.147	.....	.....	.139	.152	.156
Sugar	do	.061	.067	.079	.089	.091	.052	.048	.086	.096	.089
Coffee	do	.....	.....	.326	.318	.312	.....	.....	.294	.296	.293
Tea	do	.....	.....	.500	.561	.564	.....	.....	.532	.639	.637

[1] 16 ounces, weight of dough.

A presentation of current retail prices in 29 smaller cities is given in the following table showing the average prices for February 15, 1918.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON FEB. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Average retail prices Feb. 15, 1918.									
		Birmingham, Ala.	Bridgeport, Conn.	Butte, Mont.	Charleston, S. C.	Cincinnati, Ohio.	Columbus, Ohio.	Dallas, Tex.	Fall River, Mass.	Indianapolis, Ind.	Jacksonville, Fla.
Sirloin steak	Lb.	$0.352	$0.418	$0.310	$0.308	$0.282	$0.322	$0.330	$0.425	$0.315	$0.348
Round steak	Lb.	.316	.384	.278	.298	.273	.291	.316	.364	.313	.306
Rib roast	Lb.	.279	.316	.253	.263	.244	.249	.272	.278	.239	.277
Chuck roast	Lb.	.225	.274	.209	.210	.210	.226	.244	.235	.216	.213
Plate beef	Lb.	.170	.170	.152	.181	.177	.173	.196	.....	.171	.167
Pork chops	Lb.	.339	.338	.356	.363	.284	.316	.341	.337	.325	.353
Bacon, sliced	Lb.	.520	.506	.572	.507	.453	.478	.541	.445	.476	.500
Ham, sliced	Lb.	.440	.501	.494	.460	.434	.445	.461	.437	.457	.438
Lard	Lb.	.321	.330	.339	.338	.302	.328	.339	.317	.310	.333
Lamb	Lb.	.350	.320	.319	.357	.277	.315	.367	.319	.283	.321
Hens	Lb.	.300	.368	.383	.363	.365	.325	.302	.363	.333	.363
Salmon, canned	Lb.	.267	.362	.355	.274	.261	.275	.282	.292	.240	.285
Eggs, strictly fresh	Doz.	.522	.794	.694	.650	.614	.615	.497	.784	.598	.556
Eggs, storage	Doz.	.....	.586	.500	.617	.540	.539	.445	.578	.503	.....
Butter	Lb.	.590	.536	.595	.569	.585	.574	.551	.529	.568	.599
Cheese	Lb.	.363	.347	.350	.352	.368	.347	.365	.331	.384	.353
Milk	Qt.	.152	.145	.150	.155	.130	.130	.158	.128	.107	.180
Bread	16 oz.[1]	.089	.083	.106	.091	.081	.089	.078	.088	.077	.087
Flour	Lb.	.067	.070	.068	.076	.070	.067	.065	.074	.065	.071
Corn meal	Lb.	.055	.085	.074	.061	.060	.062	.069	.087	.065	.061
Rice	Lb.	.121	.126	.118	.092	.118	.123	.119	.121	.120	.106
Potatoes	Lb.	.039	.041	.019	.043	.037	.031	.032	.038	.031	.043
Onions	Lb.	.058	.058	.043	.053	.051	.052	.057	.051	.048	.058
Beans, navy	Lb.	.188	.190	.165	.191	.159	.181	.179	.183	.178	.195
Prunes	Lb.	.161	.171	.157	.160	.160	.157	.172	.173	.163	.176
Raisins	Lb.	.158	.158	.147	.150	.150	.152	.152	.153	.173	.176
Sugar	Lb.	.094	.100	.100	.091	.094	.094	.094	.100	.091	.098
Coffee	Lb.	.320	.326	.420	.282	.273	.300	.362	.324	.294	.327
Tea	Lb.	.762	.634	.759	.636	.706	.780	.863	.535	.703	.768

Article.	Unit.	Average retail prices Feb. 15, 1918.								
		Kansas City, Mo.	Little Rock, Ark.	Los Angeles, Cal.	Louisville, Ky.	Manchester, N. H.	Memphis, Tenn.	Minneapolis, Minn.	Newark, N. J.	New Haven, Conn.
Sirloin steak	Lb.	$0.321	$0.313	$0.290	$0.303	$0.438	$0.302	$0.264	$0.366	$0.418
Round steak	Lb.	.296	.279	.254	.293	.398	.288	.255	.377	.382
Rib roast	Lb.	.233	.260	.236	.231	.269	.243	.214	.302	.318
Chuck roast	Lb.	.202	.204	.200	.210	.239	.204	.197	.266	.276
Plate beef	Lb.	.167	.197	.158	.183	.210	.183	.149	.195	.....
Pork chops	Lb.	.310	.344	.378	.320	.338	.331	.302	.356	.337
Bacon, sliced	Lb.	.493	.506	.529	.498	.453	.500	.482	.442	.506
Ham, sliced	Lb.	.456	.488	.519	.450	.416	.429	.436	.343	.503
Lard	Lb.	.344	.341	.333	.315	.342	.327	.319	.340	.338
Lamb	Lb.	.271	.317	.314	.323	.330	.306	.259	.336	.335
Hens	Lb.	.293	.329	.378	.373	.378	.318	.315	.367	.383
Salmon, canned	Lb.	.292	.295	.326	.250	.295	.312	.331	.345	.283
Eggs, strictly fresh	Doz.	.586	.567	.491	.608	.715	.500	.585	.718	.783
Eggs, storage	Doz.	.500	.517	.480	.498	.605	.....	.493	.572	.573
Butter	Lb.	.562	.575	.555	.597	.579	.581	.534	.609	.549
Cheese	Lb.	.360	.379	.335	.389	.338	.337	.318	.360	.342
Milk	Qt.	.123	.150	.140	.128	.140	.150	.110	.145	.143
Bread	16 oz.[1]	.089	.093	.076	.081	.077	.087	.077	.076	.086
Flour	Lb.	.064	.067	.063	.068	.071	.067	.059	.073	.071
Corn meal	Lb.	.069	.064	.080	.063	.080	.059	.056	.084	.087
Rice	Lb.	.113	.117	.115	.117	.119	.103	.110	.121	.125
Potatoes	Lb.	.031	.033	.021	.035	.037	.037	.024	.042	.040
Onions	Lb.	.052	.054	.037	.047	.051	.051	.039	.058	.062
Beans, navy	Lb.	.185	.184	.166	.185	.185	.191	.176	.187	.190
Prunes	Lb.	.145	.171	.151	.169	.160	.166	.150	.174	.179
Raisins	Lb.	.145	.149	.141	.142	.153	.144	.144	.150	.154
Sugar	Lb.	.100	.095	.088	.091	.097	.096	.091	.096	.105
Coffee	Lb.	.291	.326	.312	.265	.342	.301	.309	.298	.329
Tea	Lb.	.618	.835	.591	.724	.591	.697	.504	.546	.580

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 29 CITIES ON FEB. 15, 1918—Concluded

Article	Unit.	Average retail prices Feb. 15, 1918.									
		New Orleans, La.	Omaha, Nebr.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	Rochester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Springfield, Ill.
Sirloin steak	Lb.	$0.291	$0.302	$0.282	$0.514	$0.330	$0.320	$0.289	$0.280	$0.355	$0.322
Round steak	Lb.	.253	.282	.262	.425	.307	.309	.254	.261	.324	.312
Rib roast	Lb.	.243	.231	.254	.333	.270	.263	.237	.236	.281	.251
Chuck roast	Lb.	.192	.205	.204	.298	.233	.250	.202	.205	.242	.224
Plate beef	Lb.	.166	.157	.167	.....	.198	.191	.146	.170	.179	.190
Pork chops	Lb.	.356	.297	.352	.362	.359	.327	.300	.352	.338	.314
Bacon, sliced	Lb.	.517	.486	.514	.471	.479	.443	.482	.500	.483	.494
Ham, sliced	Lb.	.450	.442	.469	.523	.423	.445	.454	.445	.441	.443
Lard	Lb.	.331	.336	.345	.341	.340	.333	.321	.360	.326	.334
Lamb	Lb.	.301	.266	.300	.355	.313	.321	.266	.292	.332	.314
Hens	Lb.	.368	.322	.337	.397	.371	.377	.297	.348	.387	.280
Salmon, canned	Lb.	.330	.285	.336	.305	.238	.294	.298	.299	.302	.268
Eggs, strictly fresh	Doz.	.485	.577	.507	.735	.617	.710	.589	.604	.705	.645
Eggs, storage	Doz.	.....	.545	.425	.586	.500	.570	.514	.550	.540	.575
Butter	Lb.	.569	.549	.713	.572	.599	.565	.549	.575	.541	.598
Cheese	Lb.	.353	.349	.324	.341	.356	.337	.331	.338	.325	.386
Milk	Qt.	.143	.123	.127	.145	.147	.136	.110	.115	.140	.125
Bread	16 oz.[1]	.073	.088	.087	.084	.089	.073	.088	.087	.085	.090
Flour	Lb.	.075	.060	.057	.068	.072	.067	.062	.054	.071	.064
Corn meal	Lb.	.063	.062	.069	.075	.061	.078	.065	.074	.....	.075
Rice	Lb.	.108	.110	.118	.119	.127	.128	.120	.129	.121	.126
Potatoes	Lb.	.038	.025	.016	.036	.040	.027	.024	.017	.032	.031
Onions	Lb.	.045	.045	.032	.050	.061	.045	.038	.045	.061	.049
Beans, navy	Lb.	.174	.173	.149	.185	.202	.182	.188	.182	.180	.195
Prunes	Lb.	.160	.164	.136	.177	.149	.188	.165	.154	.174	.164
Raisins	Lb.	.151	.166	.137	.147	.149	.151	.147	.146	.147	.179
Sugar	Lb.	.090	.090	.092	.097	.100	.097	.096	.097	.097	.092
Coffee	Lb.	.266	.315	.325	.339	.281	.303	.319	.354	.316	.295
Tea	Lb.	.634	.635	.569	.586	.738	.538	.543	.647	.596	.675

[1] Loaf 16; ounces, weight of dough.

BREAD PRICES.

Bread prices, both average and relative, for each month in the years 1913 to 1917, and for January and February, 1918, may be followed in the accompanying table.

The relative price simply means that the average price of bread for the year 1913 was taken as 100 per cent, and the relative for each month obtained by dividing the average price for the year 1913 into the average price for each month. In order to obtain the percentage of increase for any month since 1913, it is necessary only to subtract 100 from the relative number for that month. Bread reached the highest price in August, 1917, when it was 82 per cent higher than in 1913. In December, 1917, bread had dropped to 66 per cent higher than it was in 1913.

AVERAGE AND RELATIVE RETAIL PRICES OF A 16-OZ. LOAF[1] OF BREAD FOR THE UNITED STATES, BY YEARS AND MONTHS.

Year and month.	Retail price.	
	Average.	Relative.
1913	$0.050	100
1914	.056	112
1915	.063	126
1916	.065	130
1917	.082	164
1913: January	.050	100
February	.050	100
March	.050	100
April	.050	100
May	.050	100
June	.050	100
July	.050	100
August	.050	100
September	.050	100
October	.050	100
November	.050	100
December	.050	100
1914: January	.055	110
February	.055	110
March	.055	110
April	.055	110
May	.055	110
June	.055	110
July	.055	110
August	.056	112
September	.057	114
October	.057	114
November	.057	114
December	.058	116
1915: January	.060	120
February	.063	126
March	.063	126
April	.063	126
May	.064	128
June	.063	126
July	.063	126
August	.063	126
September	.062	124
October	.062	124
November	.062	124
December	.062	124
1916: January	.062	124
February	.062	124
March	.064	128
April	.062	124
May	.062	124
June	.062	124
July	.062	124
August	.064	128
September	.068	136
October	.072	144
November	.075	150
December	.070	140
1917: January	.070	140
February	.071	142
March	.072	144
April	.075	150
May	.085	170
June	.085	170
July	.088	176
August	.091	182
September	.088	176
October	.088	176
November	.088	176
December	.083	166
1918: January	.083	166
February	.083	166

[1] 16 ounces, weight of dough.

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

A comparison of wholesale and retail price changes for important food articles in recent months shows that for most commodities the rise continues to be more pronounced in wholesale than in retail prices. In collecting data for the comparison it was found that in some instances slight differences of grade or quality existed between the articles for which wholesale prices were obtainable and those for which retail prices could be secured. It was found impracticable, also, in most instances to obtain both kinds of quotations for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made.

In the table which follows the wholesale price is in each case the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question.

To assist in comparing wholesale with retail price fluctuations, the differential between the two series of quotations is given. It should not be assumed, however, that this represents even approximately the margin of profit received by the retailer since, in addition to possible differences of grade between the articles shown at wholesale and retail, various items of handling cost are included.

WHOLESALE AND RETAIL PRICES OF FOOD IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Feb.	Apr.	July.	Oct.	Jan.	Feb.
Beef, Chicago:												
Steer loin ends....W..	Lb..	$0.168	$0.175	$0.160	$0.205	$0.200	$0.200	$0.200	$0.190	$0.235	$0.200	$0.205
Sirloin steak.....R..	Lb..	.232	.260	.258	.281	.265	.273	.293	.302	.306	.302	.304
Price differential.....	.....	.064	.085	.098	.076	.065	.073	.093	.112	.071	.102	.099
Beef, Chicago:												
Steer rounds, No. 2.W..	Lb..	.131	.145	.143	.145	.120	.125	.155	.170	.190	.165	.145
Round steak.....R..	Lb..	.202	.233	.228	.241	.227	.236	.256	.266	.273	.273	.272
Price differential.....	.....	.071	.088	.085	.096	.107	.111	.101	.096	.083	.108	.127
Beef, Chicago:												
Steer ribs, No. 2....W..	Lb..	.157	.165	.145	.175	.160	.170	.210	.200	.230	.200	.200
Rib roast.....R..	Lb..	.195	.212	.213	.229	.223	.228	.241	.246	.247	.254	.251
Price differential.....	.....	.038	.047	.068	.054	.063	.058	.031	.046	.017	.054	.051
Beef, New York:												
No. 2, loins.....W..	Lb..	.158	.183	.170	.200	.180	.200	.190	.190	.275	.235	.235
Sirloin steak.....R..	Lb..	.259	.274	.282	.294	.284	.298	.318	.337	.356	.344	.347
Price differential.....	.....	.101	.091	.112	.094	.104	.098	.128	.147	.081	.109	.112
Beef, New York:												
No. 2, rounds.....W..	Lb..	.121	.135	.135	.145	.130	.140	.170	.175	.190	.180	.190
Round steak.....R..	Lb..	.249	.270	.271	.289	.275	.292	.315	.337	.360	.352	.356
Price differential.....	.....	.128	.135	.136	.144	.145	.152	.145	.162	.170	.172	.166
Beef, New York:												
No. 2, ribs.....W..	Lb..	.151	.165	.160	.180	.160	.175	.200	.190	.275	.235	.230
Rib roast.....R..	Lb..	.218	.225	.227	.243	.238	.247	.270	.279	.298	.294	.295
Price differential.....	.....	.067	.060	.067	.063	.078	.072	.070	.089	.023	.059	.065

WHOLESALE AND RETAIL PRICES OF FOOD IN SELECTED CITIES—Continued.

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Feb.	Apr.	July.	Oct.	Jan.	Feb.
Pork, Chicago:												
Loins.....W..	Lb..	$0.149	$0.165	$0.150	$0.165	$0.165	$0.210	$0.240	$0.250	$0.330	$0.270	$0.240
Chops.....R..	Lb..	.190	.204	.201	.217	.227	.250	.285	.292	.358	.316	.301
Price differential.....	.....	.041	.039	.051	.052	.062	.040	.045	.042	.028	.046	.061
Pork, New York:												
Loins, western.....W..	Lb..	.152	.163	.153	.165	.170	.195	.235	.235	.300	.265	.270
Chops.....R..	Lb..	.217	.230	.217	.239	.248	.276	.319	.326	.399	.348	.349
Price differential.....	.....	.065	.067	.064	.074	.078	.081	.084	.091	.099	.083	.079
Bacon, Chicago:												
Short clear sides...W..	Lb..	.127	.139	.113	.159	.158	.174	.218	.247	.318	.301	.284
Sliced.....R..	Lb..	.294	.318	.315	.328	.316	.336	.395	.439	.475	.498	.499
Price differential.....	.....	.167	.179	.202	.169	.158	.162	.177	.192	.157	.197	.215
Ham, Chicago:												
Smoked.....W..	Lb..	.166	.175	.163	.190	.188	.208	.243	.243	.283	.298	.298
Smoked, sliced....R..	Lb..	.266	.338	.328	.349	.333	.354	.382	.414	.439	.428	.448
Price differential.....	.....	.100	.163	.165	.159	.145	.146	.139	.171	.156	.130	.150
Lard, New York:												
Prime contracts...W..	Lb..	.110	.104	.080	.133	.159	.167	.215	.201	.246	.246	.265
Pure, tub.....R..	Lb..	.160	.156	.151	.168	.213	.223	.263	.274	.313	.330	.331
Price differential.....	.....	.050	.052	.071	.035	.054	.056	.048	.073	.067	.084	.066
Lamb, Chicago:												
Dressed, round.....W..	Lb..	.149	.170	.190	.190	.200	.215	.220	.260	.270	.240	.250
Leg of, yearling....R..	Lb..	.198	.219	.208	.231	.232	.252	.263	.287	.314	.306	.306
Price differential.....	.....	.049	.049	.018	.041	.032	.037	.043	.027	.044	.066	.056
Poultry, New York:												
Dressed fowls.....W..	Lb..	.182	.188	.175	.215	.220	.233	.265	.248	.285	.298	.313
Dressed hens.....R..	Lb..	.214	.220	.219	.256	.261	.273	.293	.287	.323	.326	.365
Price differential.....	.....	.032	.032	.044	.041	.041	.040	.028	.039	.038	.028	.052
Butter, Chicago:												
Creamery, extra...W..	Lb..	.310	.265	.265	.275	.370	.420	.440	.375	.435	.490	.490
Creamery, extra....R..	Lb..	.362	.312	.322	.335	.438	.466	.484	.432	.487	.544	.547
Price differential.....	.....	.052	.047	.057	.060	.068	.046	.044	.057	.052	.054	.057
Butter, New York:												
Creamery, extra...W..	Lb..	.323	.280	.270	.285	.395	.450	.450	.395	.443	.510	.515
Creamery, extra....R..	Lb..	.382	.328	.336	.346	.460	.492	.513	.453	.515	.574	.582
Price differential.....	.....	.059	.048	.066	.061	.065	.042	.063	.058	.072	.064	.067
Butter, San Francisco:												
Creamery, extra...W..	Lb..	.317	.245	.265	.255	.355	.390	.390	.385	.460	.530	.505
Creamery, extra....R..	Lb..	.388	.329	.338	.333	.425	.433	.452	.455	.545	.602	.589
Price differential.....	.....	.071	.084	.073	.078	.070	.043	.062	.070	.085	.072	.084
Cheese, Chicago:												
Whole milk.....W..	Lb..	.142	.133	.145	.145	.218	.213	.223	.216	.246	.233	.260
Full cream.....R..	Lb..	.....	.....	.229	.242	.321	.329	.327	.339	.368	.375	.377
Price differential.....	.....	.....	.....	.084	.097	.103	.116	.104	.123	.122	.142	.117
Cheese, New York:												
Whole milk, State.W..	Lb..	.154	.144	.146	.151	.220	.240	.245	.238	.255	.230	.259
Full cream.....R..	Lb..	.....	.....	.229	.228	.301	.305	.335	.328	.340	.344	.345
Price differential.....	.....	.....	.....	.083	.077	.081	.065	.090	.090	.085	.114	.086
Cheese, San Francisco:												
Fancy.....W..	Lb..	.159	.125	.115	.135	.180	.190	.215	.200	.220	.255	.255
Full cream.....R..	Lb..	.....	.....	.200	.229	.242	.267	.297	.297	.316	.335	.329
Price differential.....	.....	.....	.....	.085	.094	.062	.077	.082	.097	.096	.080	.074
Milk, Chicago:												
Fresh.....W..	Qt..	.038	.036	.037	.036	.045	.043	.054	.047	.074	.070	.067
Fresh, bottled.....R..	Qt..	.080	.080	.080	.081	.100	.090	.100	.100	.129	.119	.119
Price differential.....	.....	.042	.044	.043	.045	.055	.047	.046	.053	.055	.049	.052
Milk, New York:												
Fresh.....W..	Qt..	.035	.030	.030	.031	.051	.050	.049	.050	.072	.081	.077
Fresh, bottled.....R..	Qt..	.090	.090	.090	.090	.100	.109	.109	.114	.138	.150	.146
Price differential.....	.....	.055	.060	.060	.059	.049	.059	.060	.064	.066	.069	.069
Milk, San Francisco:												
Fresh.....W..	Qt..	.039	.039	.038	.038	.038	.038	.038	.043	.059	.066	.066
Fresh, bottled.....R..	Qt..	.100	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121
Price differential.....	.....	.061	.061	.062	.062	.062	.062	.062	.057	.062	.055	.055
Eggs, Chicago:												
Fresh, firsts.....W..	Doz.	.226	.188	.168	.218	.485	.440	.305	.310	.370	.565	.500
Strictly fresh.....R..	Doz.	.292	.261	.248	.296	.525	.503	.376	.406	.469	.651	.593
Price differential.....	.....	.066	.073	.080	.078	.040	.063	.071	.096	.099	.086	.093
Eggs, New York:												
Fresh, firsts.....W..	Doz.	.249	.215	.200	.241	.505	.448	.330	.350	.400	.645	.568
Strictly fresh.....R..	Doz.	.397	.353	.326	.372	.667	.591	.424	.477	.627	.808	.697
Price differential.....	.....	.148	.138	.126	.131	.162	.143	.094	.127	.227	.163	.129
Eggs, San Francisco:												
Fresh.....W..	Doz.	.268	.230	.220	.240	.380	.300	.280	.320	.435	.610	.410
Strictly fresh.....R..	Doz.	.373	.338	.310	.333	.480	.390	.374	.392	.608	.710	.489
Price differential.....	.....	.105	.108	.090	.093	.100	.090	.094	.072	.173	.100	.079

WHOLESALE AND RETAIL PRICES OF FOOD IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Feb.	Apr.	July.	Oct.	Jan.	Feb.
Meal, corn, Chicago:												
Fine.....W..	Lb..	$0.014	$0.016	.....	$0.019	$0.024	$0.025	$0.036	$0.045	$0.052	$0.051	$0.053
Fine.....R..	Lb..	.029	.028	$0.031	.031	.042	.041	.050	.058	.071	.070	.069
Price differential.....	.....	.015	.012	.....	.012	.018	.016	.014	.013	.019	.019	.016
Beans, New York:												
Medium, choice....W..	Lb..	.040	040	058	.098	.108	.113	.130	.154	.138	.141	.134
Navy, white.....R..	Lb..	.....	.....	081	.113	.149	150	.162	.188	.185	.185	.183
Price differential.....	.....	.....	.....	023	.015	.041	037	032	034	.047	.044	.049
Potatoes, Chicago:												
White [1].....W..	Bu..	.614	1.450	400	.975	1.750	2.400	2.800	2.625	1.135	1.185	1.245
White.....R..	Bu..	.900	1.640	.760	1.356	2.370	3.000	3.455	2.975	1.660	1.680	1.740
Price differential.....	.....	.286	190	.300	381	.620	.600	.655	.350	.525	.495	.495
Rice, New Orleans:												
Head.....W..	Lb..	.050	054	049	.046	.048	048	049	.071	.077	.088	.081
Head.....R..	Lb..	.....	.....	.075	.074	.074	074	088	.101	100	.106	.108
Price differential.....	.....	.....	.....	026	028	.026	026	039	.030	.023	.018	.027
Sugar, New York:												
Granulated.....W..	Lb..	.043	.042	059	.075	.066	066	.081	.074	.082	.073	.073
Granulated.....R..	Lb..	.049	.046	.063	.079	.074	076	.087	.084	.097	.097	.091
Price differential.....	.....	.006	004	004	.004	.008	010	.006	.010	.015	.024	.018

[1] Good to choice.

Wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table which follows. A few articles included in the preceding table are omitted from this one, owing to the lack of satisfactory data for 1913. It will be seen from the table that since the beginning of 1917 the retail prices of most of the commodities included in the exhibit have fluctuated at a lower percentage level, as compared with their 1913 base, than have the wholesale prices. This is particularly noticeable in the case of pork, bacon, lard, dressed lamb, butter, milk, eggs, corn meal, and potatoes. For corn meal, especially, there has been a much smaller percentage of increase in the retail than in the wholesale price. Comparing February, 1918, prices with the average for 1913, it is seen that only 4 articles of the 25 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are beef in Chicago (three price series) and granulated sugar in New York. In several of the months of 1917 the retail prices of these articles were relatively lower than were the wholesale prices.

While the percentage of increase in retail prices was less than that in wholesale prices for most of the articles, it should be noted that in the majority of cases the margin between the wholesale and the retail price in February, 1918, was considerably greater than in 1913. The following table shows, for example, that the wholesale price of short clear side bacon increased 124 per cent between 1913 and February, 1918, while the retail price of sliced bacon increased only 70 per cent. The preceding table shows, however, that the difference was 16.7 cents per pound in 1913 and 21.5 cents per pound in February, 1918, or 4.8 cents more at the latter date than at the former. It is also seen that the wholesale price in February, 1918, had increased 15.7 cents over the 1913 price, while the retail price had increased 20.5 cents.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917					1918	
		1914	1915	1916	Jan.	Feb.	Apr.	July.	Oct.	Jan.	Feb.
Beef, Chicago:											
Steer loin ends (hips).....W..	100	104	95	122	119	119	119	113	140	119	122
Sirloin steak.....R..	100	112	111	121	114	118	126	130	132	130	131
Beef, Chicago:											
Steer rounds, No. 2.....W..	100	111	109	111	92	95	118	130	145	126	111
Round steak.....R..	100	115	113	119	112	117	127	132	135	135	135
Beef, Chicago:											
Steer ribs, No. 2.....W..	100	105	92	111	102	108	134	127	146	127	127
Rib roast.....R..	100	109	109	117	114	117	124	126	127	130	129
Beef, New York:											
No. 2 loins, city.....W..	100	116	108	127	114	127	120	120	174	149	149
Sirloin steak.....R..	100	106	109	114	110	115	123	130	137	133	134
Beef, New York:											
No. 2 rounds, city.....W..	100	112	112	120	107	116	140	145	157	149	157
Round steak.....R..	100	108	109	116	110	117	127	135	145	141	143
Beef, New York:											
No. 2 ribs, city.....W..	100	109	106	119	106	116	132	126	182	156	152
Rib roast.....R..	100	103	104	111	109	113	124	128	137	135	135
Pork, Chicago:											
Loins.....W..	100	111	101	111	111	141	161	168	221	181	161
Chops.....R..	100	107	106	114	119	132	150	154	188	166	158
Pork, New York:											
Loins, western.....W..	100	107	101	109	112	128	155	155	197	174	178
Chops.....R..	100	106	100	110	114	127	147	150	184	160	161
Bacon, Chicago:											
Short clear sides.....W..	100	109	89	125	124	137	172	194	250	237	224
Sliced.....R..	100	108	107	112	107	114	134	149	162	169	170
Hams, Chicago:											
Smoked.....W..	100	105	98	114	113	125	146	146	170	180	180
Smoked, sliced.....R..	100	127	123	131	125	133	144	156	165	161	168
Lard, New York:											
Prime, contract.....W..	100	95	73	121	145	152	195	18[illegible]	221	224	241
Pure, tub.....R..	100	98	94	105	133	139	164	171	196	206	207
Lamb, Chicago:											
Dressed, round.....W..	100	114	128	128	134	144	148	174	181	161	168
Leg of, yearling.....R..	100	111	105	117	117	127	133	145	159	155	155
Poultry, New York:											
Dressed fowls.....W..	100	103	96	118	121	128	146	136	157	164	172
Dressed hens.....R..	100	103	102	120	122	128	137	134	151	152	171
Butter, Chicago:											
Creamery, extra.....W..	100	85	85	89	119	135	142	121	140	158	158
Creamery, extra.....R..	100	86	89	93	121	129	134	119	135	150	151
Butter, New York:											
Creamery, extra.....W..	100	87	84	88	122	139	139	122	137	158	159
Creamery, extra.....R..	100	86	88	91	120	129	134	119	135	150	152
Butter, San Francisco:											
Creamery, extra.....W..	100	77	84	80	112	123	123	121	145	167	159
Creamery, extra.....R..	100	85	87	86	110	112	116	117	140	155	152
Milk, Chicago:											
Fresh.....W..	100	95	97	95	118	113	142	124	195	184	176
Fresh, bottled, delivered..R..	100	100	100	101	125	113	125	125	161	149	149
Milk, New York:											
Fresh.....W..	100	86	86	89	146	143	140	143	206	231	220
Fresh, bottled, delivered.R..	100	100	100	100	111	121	121	127	153	167	162
Milk, San Francisco:											
Fresh.....W..	100	100	97	97	97	97	97	110	151	169	169
Fresh, bottled.....R..	100	100	100	100	100	100	100	100	121	121	121
Eggs, Chicago:											
Fresh, firsts.....W..	100	83	74	96	215	195	135	137	164	250	221
Strictly fresh.....R..	100	89	85	101	180	172	129	139	161	22[illegible]	2[illegible]
Eggs, New York:											
Fresh, firsts.....W..	100	86	80	97	206	180	133	141	161	250	22[illegible]
Strictly fresh.....R..	100	89	82	94	168	149	107	120	158	204	176
Eggs, San Francisco:											
Fresh.....W..	100	86	82	90	142	112	105	119	162	228	153
Strictly fresh.....R..	100	91	83	89	129	105	100	105	163	190	131
Meal, corn, Chicago:											
Fine.....W..	100	114	.....	136	171	179	257	321	371	364	379
Fine.....R..	100	97	107	107	145	141	172	200	245	241	238
Potatoes, Chicago:											
White, good to choice....W..	100	236	65	159	285	391	456	428	185	193	204
White.....R..	100	182	78	151	263	333	384	331	184	187	193
Sugar, New York:											
Granulated.....W..	100	98	137	174	153	153	188	172	191	170	170
Granulated.....R..	100	94	129	161	151	155	178	171	198	198	186

COMPARISON OF RETAIL PRICES IN THE UNITED STATES AND OTHER COUNTRIES.

The index numbers of retail prices published by several foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced to a common base, viz, prices for July, 1914, equal 100. For Great Britain, Norway, and Sweden the index numbers are reproduced as published in the original sources, while those for Austria and Germany have been rounded off to the nearest whole number from figures published in the British Labor Gazette. All of these are shown on the July, 1914, base in the sources from which the information is taken. The index numbers here shown for the remaining countries have been obtained by dividing the index for July, 1914, as published, into the index for each month specified in the table. As indicated in the table, some of these index numbers are weighted and some are not, while the number of articles included differs widely. They should not, therefore, be considered as closely comparable one with another.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES.

[Prices for July, 1914=100.]

Year and month.	United States: 15 foodstuffs, 45 cities. Weighted.	Australia: 46 foodstuffs, 30 towns. Weighted.	Austria: 18 foodstuffs, Vienna. Weighted.	Canada: 29 foodstuffs, 60 cities. Weighted.	France: 13 foodstuffs, cities over 10,000 population (except Paris). Weighted.	Germany: 19 foodstuffs, Berlin. Weighted.
1914.						
July	100	100	100	100	[1] 100	100
October	103	99	104	108	.....	116
1915.						
January	101	107	121	107	[1] 110	131
April	97	113	166	105	.....	157
July	98	131	179	105	[1] 123	170
October	101	133	217	105	.....	193
1916.						
January	105	129	.....	112	[1] 133	189
April	107	131	222	112	[1] 137	220
July	109	130	.....	114	[1] 141	218
October	119	125	.....	125	[1] 146	209
1917.						
January	125	125	272	138	[1] 154	.....
February	130	126	.....	141	.....	.....
March	130	126	.....	144	.....	.....
April	142	127	275	145	[1] 171	.....
May	148	127	288	159	.....	.....
June	149	127	312	160	.....	.....
July	143	126	337	157	.....	.....
August	146	129	315	157	.....	.....
September	150	129	.....	157	.....	.....
October	154	129	.....	159	.....	.....
November	152	.....	.....	163	.....	.....
December	154	.....	.....	165	.....	.....

[1] Quarter beginning that month.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES—Concluded.

Year and month.	Great Britain: 21 foodstuffs, 600 towns. Weighted.	Italy: 7 foodstuffs, 43 cities (variable). Not weighted.	Netherlands: 29 articles, 40 cities. Not weighted.	New Zealand: 59 foodstuffs, 25 towns. Weighted.	Norway: 24 (21 foods) articles, 20 towns (variable). Not weighted.	Sweden: 21 articles, 44 towns. Weighted.
1914.						
July	100	100	[1] 100	100	100	100
October	112	104	[2] 107	102	[3] 110	[3] 107
1915.						
January	118	108	114	111	[3] 118	[3] 113
April	124	113	123	113	[3] 125	[3] 121
July	132½	120	131	112	[3] 129	[3] 124
October	140	127	128	112	[3] 134	[3] 128
1916.						
January	145	133	135	116	143	[3] 130
April	149	132	142	118	155	[3] 134
July	161	132	150	119	176	[3] 142
October	168	132	158	120	182	[3] 152
1917.						
January	187	144	165	127	.....	160
February	189	154	165	126	.....	166
March	192	161	169	126	204	170
April	194	164	170	127	212	175
May	198	167	180	128	227	175
June	202	171	184	128	.....	175
July	204	172	188	127	.....	177
August	202	.....	.....	127	261	181
September	206	188	.....	129	.....	187
October	197	.....	.....	.....	273	192
November	206	.....	.....	.....	278	200
December	205	.....	.....	.....	.....	.....

[1] January–July. [2] August–December. [3] Quarter beginning that month.

COST OF LIVING IN THE NEW YORK SHIPBUILDING DISTRICT.

The Bureau of Labor Statistics, in cooperation with the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation, has just completed a study of the cost of living in shipbuilding centers in the second district. This district comprises New York City and adjacent localities, in which reside a considerable number of families of workers in shipbuilding establishments.

Schedules covering in detail the income and expenditure for the year 1917 of 608 families were secured through personal visits of the agents of the Bureau of Labor Statistics to the homes of families of workers in shipyards and of other families in the localities in which shipbuilding workers reside.

The figures in the second column of the table show the average expenditures per family for the year 1917 for each of the principal items that enter into the cost of living. The third column shows in the form of percentages the proportion of the total amount expended for each item. The last three columns show the average per cent of increase in the retail prices of each item, in 1915, 1916, and 1917 above the prices in 1914. The increase in these retail prices as shown in this column was obtained by personal visits of the agents of the

bureau from retail dealers in these localities patronized by workers in shipbuilding establishments.

The item "miscellaneous" is made up of expenditures for all other articles, varying in number and amount, not included in the items specified above, such as tobacco, liquors, cleaning supplies, amusements, vacation, etc. The increase in cost of many of these articles could not be traced through the period owing to changes in quality or size of unit, but it has been assumed that the percentage of increase has been approximately the same as the average increase of all items combined.

The average per cent of increase for the total of all items each year is a weighted average computed by multiplying the proportion of expenditure for each item by the per cent of increase in the retail prices of that item as compared with 1914 and dividing the aggregates of the products thus obtained by 100.

AVERAGE EXPENDITURES OF 608 FAMILIES IN THE NEW YORK SHIPBUILDING DISTRICT IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917 ABOVE THE PRICES IN 1914.

Expenditures for—	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 above the prices in 1914.		
	Average.	Per cent.	1915	1916	1917
Clothing:					
Males	$109.76	8.14	4.78	20.32	51.40
Females	90.31	6.70	4.87	24.73	57.63
Total	200.07	14.84	4.82	22.31	54.21
Furniture and furnishings	43.58	3.23	8.43	27.60	56.47
Food	607.02	45.01	1.34	16.26	55.28
Housing	174.14	12.91	.10	.05	2.63
Fuel and light	62.21	4.61	.06	10.98	19.92
Miscellaneous	261.62	19.40	1.97	14.91	44.68
Total	1,348.64	100.00	1.97	14.91	44.68

COST OF LIVING AND WAGES IN GERMANY.[1]

GENERAL RELATION OF WAGES TO COST OF LIVING.

The Neue Zeit, the weekly journal of the German Social-Democratic Party, in its issue of December 7, 1917, contains a very interesting article on the relation of wages to the cost of living in Germany during the war,[2] extracts of which are given below:

"The longer the war lasts," says the writer, "the more are increasing masses of the nation becoming aware of the fact that these same masses—skilled and unskilled workmen, salaried employees, Government officials, etc.—have to bear the costs of the war and in

[1] Translated by Alfred Maylander.

[2] Die Neue Zeit. Warenpreise und Arbeiterlöhne, by A. Ellinger. Vol. 36, Pt. 1, No. 10. Stuttgart, Dec. 7, 1917.

part are being reduced to extreme poverty while other circles of the population derive great profit from the war and enormously increase their income and their wealth. Among these latter are not only the large contractors of war supplies and industrial magnates who during the war have obtained millions over millions from the State and the masses of the population, but commerce and agriculture have also greatly profited from the war. The large subscriptions of war loans by these circles, the unprecedented large deposits in rural savings banks, the extensive lifting of rural mortgages, etc., furnish the best proof of this fact.

"I do not mean to assert," continues the writer, "that the accumulation of immense wealth in the hands of a few is solely due to the profiteering tendencies of the fortunate owners of this wealth, that it is solely the fruit of shameless exploitation and fraud. In some cases this may be true, but in general this development has naturally resulted from the essential nature of capitalism and the present-day right of ownership, as well as from the isolation and financial condition of Germany. This development is based on the facts that one part of the nation has in its hand the means of production required for the entirety of the nation, that another part owns the land which is to provide nourishment for the entirety, and that at present this land does not produce as much as is needed to sustain life in the usual manner, and, finally, that consequent to our isolation from the world's market we can not supplement this deficit from abroad. These combined facts put in a much greater measure the nonpossessing classes at the mercy of the possessing classes and render them much more tributary to the latter than was the case in normal times.

"The possibility for such enormous profits as have been witnessed during the war was given through the continuous upward trend of prices since the outbreak of the war. The Government is partly guilty for this increase of prices in so far as one may speak of guilt in the development of economic matters. Not only has the Government through extensive circulation of paper money contributed to the depreciation of German currency and thereby lessened its purchasing power but also at the beginning of the war it paid fabulously high prices for war materials in order to accelerate the adaptation of industry to war needs. This, it is true, brought about the transition of German industry from a peace to a war basis, but at the same time it had the effect of making that part of industry which is not employed in the production of war materials want to reap like profits as the war industry proper. Under the pressure of the consuming masses of the population the Government has in some measure counteracted this endeavor through the fixing of maximum prices; but it has done so unwillingly and only proceeded against the worst ex-

cesses in this respect. This procedure is in itself entirely comprehensible. The Government needs money for the conduct of the war. It, however, can not dare to raise the required sums through direct taxation of the individual citizens. It must raise the money through bond issues. As such Government loans could never be fully disposed of through sums subscribed by the great mass of the poorer classes of the population, it can only suit the Government if industry, commerce, and agriculture extract these sums from the great masses of the population through "good" prices, and put them at its disposal in the form of subscriptions of war loans. In this manner the individual citizen hardly notices that ultimately it is he who finances the war. As a matter of fact, industrial magnates, banks, landowners, business men, etc., have only apparently subscribed the greater part of the war loans; in reality it is the great mass of the population which by hard work and privation has raised the sums required for these loans and given to the fortunate owners of the land, of capital, and of the means of production the opportunity to enrich themselves at its expense.

"But the consumers themselves are partly responsible for the high prices. On the outbreak of the war they began hoarding supplies and thus created a scarcity of supplies and a consequent inflation of prices at a time when actual conditions did not warrant it. Under the capitalistic régime prices will always rise when the demand for goods is greater than the supply. The more scarce and indispensable the goods in question are the more will the prices rise. And prices will, of course, rise beyond all bounds if a general scarcity of supplies sets in and the individual can barely satisfy his hunger. In such a case the increase of the price of one article will automatically extend to all other articles without regard to the fact whether the costs of production justify such an increase or not.

"When, after the outbreak of the war, conditions had come to such a point the consumers began to clamor for maximum prices. But only too soon they discovered that maximum prices are by no means a cure-all. Immediately after maximum prices had been decreed a large part of the well-to-do consumers, in conjunction with producers and dealers, set out to evade them. Thus it came about that articles for which maximum prices had been fixed disappeared over night from the market and were obtainable only for those who did not care how high a price they had to pay. In order to stop this evasion of the law the rationing of all articles that could be rationed was demanded so that everybody would get some of the available supplies. But even in rationed articles a flourishing trade is sometimes carried on at really exorbitant prices. Flour, butter, and other foodstuffs sometimes bring in illicit trade five times as much

and more as they would bring if acquired legally by means of rationed distribution.

"As set forth here various circumstances, among which should also be mentioned the low quotation abroad of German exchange, contribute to the continuous increase of prices. This increase of prices is tantamount to a depreciation of German money. The workman, who with his wages must buy the necessities of existence, notices this by the fact that his wages are no longer sufficient to purchase the necessities of life. As he is not willing to die of starvation he finds himself facing the necessity of demanding higher wages. Such a demand is, however, resisted by the employers and often most strongly by those employers who have been doing a flourishing business during the war and have actually profited by the existing high prices. Even if the employers are reasonable enough to grant wage increases and high-cost-of-living bonuses, these are without exception not sufficient to counterbalance the increase in prices and the depreciation of the German money. Employers, moreover, who have granted wage increases, endeavor, as a rule, to shift them upon the consumer, and if possible, with a profit for themselves. This causes a further increase of prices and new wage demands become necessary; and this process goes on without end. The workman soon notices that in the long run he can not counterbalance the increase of prices through wage increases granted to him, because during the war the owner of the means of production always has the advantage of him. He is the owner of the products without which the workman can not live: thanks to Germany's isolation from the world's markets he has a monopoly of the sale of these products and he only sells them at prices giving him the same or rather a better profit than in prewar times.

"Thus the course of commodity prices and of wages during the war has become a real tragedy for the working class in the widest sense, whether they are wage-earners, salaried employees, or officials. In August, 1917, according to Calwer, the cost of the weekly family ration was 54.67 marks ($13.01) as compared with 25.12 marks ($5.98) in July, 1914, that is to say, it has risen during the war more than 117 per cent. It must, moreover, be noted that the commodities on which Calwer bases his calculation are mostly rationed commodities, of which the supply is so inadequate that they do not furnish sufficient sustenance. If the workingman wants barely to survive and retain his working capacity he must buy considerable quantities of nonrationed commodities or else procure rationed commodities through illegal channels, and in both these cases he pays far higher prices than Calwer indicates. To this must be added the fact that the quality of a large number of food articles such as flour,

bread, potatoes, coffee, etc., has deteriorated. Moreover, the increase in the cost of fuel, clothing, shoes, and household necessities of all kinds has been far more rapid than the increase of the articles represented by the Calwer index numbers. Certain goods have increased in price by 500, 800, and even 1,000 per cent, and without exaggeration the average increase of the cost of living may be estimated at between 200 and 300 per cent.

"Meantime, according to an investigation of the Imperial Statistical Office, wages of the great mass of working people have on an average barely increased by 50 per cent.[1] The data published by this office show that in September, 1916, i. e., during the third year of the war, the average wages of male workers had increased by 46 per cent and those of female workers by 54.1 per cent. These figures are confirmed by a comprehensive investigation by the Central Council of the Hirsch-Duncker trade-unions as to the increase of wage of male workers in the more important German industries. This investigation, which compares the wages paid in January, 1917, with those current before the outbreak of the war, shows that, although metal workers' wages had increased by 69 per cent in Greater Berlin, in the other Provinces of Prussia and in other States of the Empire wage increases in this trade were much lower, and in some instances did not exceed 16 per cent. In the chemical industries of the Bitterfeld district time wages had increased by 26 to 35 per cent and piecework wages by 34 per cent. The trade-union leader Hartman estimates that in the tobacco industry wage increases during the period 1913–1915 amounted to 4 per cent and in 1916 to between 10 and 20 per cent. According to an investigation of the Federation of German Textile Workers the average weekly wage of female workers in the Adorf district was 15.92 marks ($3.79) in July, 1917, while in the same month weekly wages of between 9 and 10 marks ($2.14 and $2.38) were still common in Krimmitschau.

"These data demonstrate plainly that the so-called 'high' wages of workers are a myth. A relatively large number of capitalists, manufacturers, dealers, and landowners have doubled and trebled their income and wealth, but very small is the number of workers whose wages have been so increased that they were not forced to lower their standard of living, i. e., whose present-day wages have the same purchasing power as their prewar wages. The great mass of the working people were only able to obtain insignificant wage increases which were entirely insufficient to make up for the increased cost of living. The value of their labor depreciated during the war in the same ratio in which the income, ground rent, and profits of a large number of capitalists and landowners increased. If in spite of these facts the official organs and secretaries of employers' associations

[1] See MONTHLY REVIEW, December, 1917, pp. 40–50.

raise the cry that wages must be lowered and intimate that otherwise German industry will go under, it must be characterized as an impudence, which is to be combated with the strongest means at the disposal of the workers. As long as the industries are able to pocket such profits as those which they have reaped during the war German industry will not perish, but will fatten in a manner dangerous to the public weal, while, on the other hand, one only need to take a look at the German workmen in order to perceive that they suffer greatly from undernutrition, that they are degenerating, and that in spite of their so-called 'high' wages misery looks out of their eyes."

The writer concludes his article with the following words: "Whoever raises the question of a reduction of wages should rather make it his first care to bring the cost of living, if only approximately, back to its former level. When this has been accomplished the workmen will be willing to discuss lower wages. The present 'high' wages do not benefit them at all. The workmen are only well off when their wages, be they high or low, enable them to live in a manner fit for human beings. To-day they can not do so in spite of their apparently high wages, and if the prices of foodstuffs remain at their present level or continue to increase it will become the sacred duty of the workmen to themselves and to the German nation to see to it that their wages are still further increased. For the strength of the nation is based upon the health of the working classes, and thanks to the lessened purchasing power of the wages and the general scarcity of all necessities their health has been undermined to a serious degree."

WAGES AND COST OF LIVING OF METAL WORKERS.

The Leipziger Volkszeitung[1] complains that the wages of metal workers in Leipzig have not kept pace with the rise in the cost of living; that employers have resorted to all kinds of chicanery in order to frustrate those provisions of the national auxiliary service law which were enacted for the protection of labor; and that despite the enormous profits of the metal works, which in several cases have allowed an increase in dividend from 6 and 8 per cent in 1915 to 20 and even 40 per cent in 1916, the employers have thoroughly organized themselves and have determined not to raise wages.

In support of the fact that the metal workers do not receive wages equivalent to the salaries of "cabinet members" (*Ministerialgehalter*), as the employers would like to make the public believe, the Volkszeitung quotes some statistical data. In a collective agreement concluded in April, 1917, the following minimum weekly wage rates were fixed: 35 marks ($8.33) for male juvenile workers 16 to 17 years of age, 44 marks ($10.47) for unskilled and 55 marks ($13.09) for skilled adult male workers, and 25 marks ($5.95) for female workers.

[1] Leipziger Volkszeitung. Die "Ministergehälter" der Metallarbeiter. Leipzig, Dec. 21, 1917.

According to the wage statistics of the local Leipzig (city) sick fund, 19,744 male and 11,938 female metal workers were insured in the fund at the end of September, 1917. If from these figures are deducted 3,798 male juvenile workers under 16 years of age and 821 female juvenile workers there remain 15,946 male and 11,117 female workers who should have received at least the above minimum rates of wages. The wage statistics of the sick fund show, however, that 2,117 adult male and 5,055 adult female workers earned lower wages than the minimum wages. In other words, over 14 per cent of the male workers and 45 per cent of the female workers must have been rated by the employers as not coming up to the minimum of efficiency. In taking up the problem of the cost of living the Volkszeitung states that one argument used by the employers in refusing to grant wage increases is that on the basis of the officially fixed maximum prices the cost of living in Germany has gone down in comparison with what it was last spring. In advancing this argument they point to the index numbers on cost of living by Calwer, the well-known German statistician. They forget, however, to quote Calwer's significant statement that, as the available supply of food is far below the demand, people have perforce to buy at prices above the maximum prices, and also his conclusion: "The cost of living has gone up considerably of late."

The actual cost of living is shown in the Volkszeitung by means of cost-of-living data furnished the German Metal Workers' Union. The following table gives the expenditure of a family of four persons in Leipzig in the week September 16 to 22, 1917:

WEEKLY COST OF LIVING OF A METAL WORKER'S FAMILY OF FOUR PERSONS IN LEIPZIG FOR THE THIRD WEEK OF SEPTEMBER, 1917.

	Quantity.	Amount of expenditure.
Rationed foodstuffs:		
Bread ..... lbs..	17.6	$0.61
Meat ..... lbs..	1.8	.83
Butter ..... lb..	.4	.31
Eggs ..... doz..	½	.38
Jam ..... lb..	.8	.17
Macaroni ..... lb..	.3	.04
Oat foods ..... lb..	.8	.04
Potatoes ..... lbs..	30.9	.67
Margarine ..... lb..	.1	.06
Sugar ..... lbs..	1.5	.10
Milk ..... qts..	5.5	.50
Cheese ..... lb..	.3	.21
Soap ..... lb..	.1	.05
Washing powder ..... lb..	.6	.07
Total	.....	4.04
Nonratione foodstuffs:		
White cabbage ..... lbs..	4.4	.24
Red cabbage ..... lbs..	4.4	.28
Curly ..... lbs..	4.4	.28
Carrots ..... lbs..	4.4	.24
Onions ..... lb..	.6	.04
Tomatoes ..... lbs..	4.4	.57
Nonrationed foodstuffs—Con.		
Cooking fruit ..... lbs..	6.6	$0.60
Table fruit ..... lbs..	7.7	1.00
Spices	.....	.12
Salad	.....	.12
Salt ..... lbs..	2.2	.06
Coffee substitutes ..... lb..	.8	.14
Total	.....	3.69
Other expenditures:		
Clothing, shoes, etc	.....	5.00
Wood and coal	.....	.19
Gas	.....	.38
Trade-union dues, newspapers	.....	.30
Insurance	.....	.32
Rent (3 rooms and kitchen)	.....	1.90
Total	.....	8.09
Cost of additional food rations allowed to heavy workers	.....	.87
Grand total	.....	16.69

The data included in this table refer only to the most essential necessities; they leave out such incidental expenses as amusements, car fare, gifts, etc. The following table shows in more summarized form the cost of living of a family of four persons in eight other large cities of Germany so as to permit comparison with the cost of living in Leipzig:

WEEKLY COST OF LIVING OF A METAL WORKER'S FAMILY OF FOUR PERSONS IN NINE LARGE GERMAN CITIES FOR THE THIRD WEEK OF SEPTEMBER, 1917.

Locality.	Expenditures for food.			Miscellaneous expenditures.	Total.
	Rationed foodstuffs.	Non-rationed foodstuffs.	Additional rations for heavy workers.		
Berlin	$5.27	$3.03	$0.37	$8.16	$16.83
Cologne	5.51	2.58	.43	7.16	15.68
Düsseldorf	4.35	3.16	.15	8.51	16.17
Elberfeld	4.26	2.21	.75	8.34	15.56
Bremen	4.73	2.68	.36	7.40	15.17
Bielefeld	4.82	2.23	.43	7.00	14.48
Breslau	4.90	1.98	.50	7.08	14.46
Essen	3.42	1.73	.49	8.60	14.24
Leipzig	4.04	3.69	.87	8.09	16.69

A comparison of the figures given in the preceding table shows that the cost of living is highest in Berlin and that Leipzig comes in second place. Leipzig metal works, however, consider 1.35 marks (32 cents) a suitable wage for skilled workers and only a small number of piece-workers earn as much as 2 marks (47½ cents) per hour, while metal workers in Berlin receive much higher wages. The cost of living is lowest in Essen, probably owing to the fact that the Krupp works furnish housing and food to most of their workmen at cost.

The cost of living figures for September, 1917, shown in the preceding tables indicate a considerable increase over the cost of living figures for April and July, 1916, published in the Reichs-Arbeitsblatt and reproduced in the MONTHLY REVIEW of March, 1918. The latter data already led to the conclusion that the majority of workmen's and low-salaried employees' families were living beyond their income from earnings and according to the data furnished by the metal workers' federation for September, 1917, conditions governing the cost of living in Germany seem to have gone from bad to worse.

HIGHER BASIC WAGES OR HIGH-COST-OF-LIVING BONUSES.

In an article under the above title in the Neue Zeit [1] Emil Dittmer discusses the question whether higher basic wages or high-cost-of-living bonuses are preferable from the worker's point of view.

[1] Die Neue Zeit. Wochenschrift der deutschen Sozialdemokratie. "Höhere Grundlöhne oder Teuerungszulagen" by Emil Dittmer. Vol. 36, part 1, No. 4. Stuttgart, Oct. 26, 1917.

By way of introduction the writer points out the rapid increase during the second quarter of 1917 of the membership of trade-unions. During this quarter, to quote only a few examples, the organization of the metal workers gained 33,000 members, that of the factory workers 8,000, of the building trades 7,000, of the woodworkers 4,000, of the miners 13,000, of the textile workers 6,000, etc. If the many difficulties which during the war are hampering the development of trade-unions are taken into consideration these figures speak eloquently for the attractive power of the trade-unions. For the third quarter of 1917 the three great trade-union movements of Germany (the free, Christian, and Hirsch-Duncker trade-unions) report also a similar increase of membership. The exultation of the German Employers' Journal (Deutsche Arbeitgeberzeitung) and of other papers friendly to employers' interests over the downfall of trade-unionism was therefore entirely premature.

With this increase of their membership the trade-unions enter into a new phase. Hitherto their activities were nearly exclusively centered upon preventing a lowering of the worker's standard of living. "From now on," says the writer, "they must with all means at their disposal try to retain the advantages which they have gained and even improve them, for the employers are already busily engaged in influencing public opinion in favor of a reduction of the war wages." The Berliner Börsenzeitung (Berlin Stock Exchange Journal) said lately:

"The nearer Germany gets to peace and to restoration of its international trade relations, the more must we work for a gradual reduction of the present abnormal wages, if we intend to be able to compete successfully with foreign production. The present high wages and the large share they form of the costs of production make it appear doubtful whether we will be able to produce as cheaply as will be necessary to reconquer the world's markets.

The Deutsche Arbeitgeberzeitung, of course, readily made this argument its own and added to it: "The working classes should comprehend that under the present circumstances it is to their own interest that they be contented." To which the writer replies that German organized labor, as represented by the free, Christian, and Hirsch-Duncker trade-unions, will never comprehend why wages should be reduced first before a reduction of the prices of commodities has taken place, and that this latter prerequisite will not be given for many months after the termination of the War.

The writer then proceeds to call attention to the tendency during the War of granting temporary high-cost-of-living bonuses and bonuses graduated in proportion to the size of the family. This tendency is considered harmful, as it aims to keep basic wages as low as

possible. The initiative for this tendency was given by the State and the municipalities. High-cost-of-living bonuses, as a rule, are being granted with the mental reservation of rescinding them after the War, while the allowance of bonuses to the married and those having children is based on an entirely false idea of what constitutes a wise attitude to the problem of population. It is significant that even a high public official, viz, Dr. Luppe, the mayor of Frankfort on the Main, has severely criticized the present system of remuneration of medium and low-salaried Government employees and workmen in Prussia.[1] The new Prussian appropriation law of April 1, 1917, provides for a monthly high-cost-of-living bonus of 12 marks ($2.86) for the first child, 13 marks ($3.09) for the second child, 14 marks ($3.33) for the third child, and so on. An employee or workman with eight children, for instance, would receive a total bonus of 139 marks ($33.08) for his children. This discrimination in favor of families with numerous children is a true product of the War. Aside from the fact that this policy does by no means promote an increase of the population, no State Government can for any length of time bear the costs of such a policy. At present the salaries of Government and municipal officials in Germany and also the wages of workmen are based on a system of low initial salaries with increasing premiums for length of service in connection with promotion into higher salary or wage classes. Dr. Luppe demonstrates that this system neither promotes early marriages nor does it tend to increase the number of children of wageworkers who marry while still young, while on account of the low initial salaries and wages paid on the basis of this system the Government loses the services of really efficient young men who can obtain much more remunerative employment in private establishments. A system of remuneration which is not based on efficiency—an efficient young single workman may under this system receive 4 marks per day, while an inefficient married workman with numerous children may receive 8 marks per day—moreover, creates serious discontent. Dr. Luppe, therefore, recommends that the State and municipal governments shall adopt high initial salaries and reduce the number of the higher salary and wage classes.

A large number of private employers of late have also met wage demands by granting high-cost-of-living bonuses or bonuses based on the size of the families of their employees and workmen. As a rule, the individual wageworker does not mind in what form he receives a wage increase, be it called a war bonus, a high-cost-of-living bonus, or a family allowance. All he cares for is that he receives more money for his services. He does not consider that these bonuses are granted

[1] Frankfurter Zeitung. Frankfort on the Main, Aug. 12, 1917.

under the present pressure of a great scarcity of male and female labor, that they are not binding, and that they may be revoked at any time at the pleasure of the employer. For this reason the writer points out that the trade-unions should make it their particular task to see that all collective agreements concluded in the future shall provide higher initial or basic wages and longer duration of the agreement.

He predicts that unless this policy is adopted by the trade-unions the German workmen will face an unprecedented era of labor disputes after the conclusion of the War because the employers of all industrial branches are even now solidly organized with the object of preventing further wage increases during the War and of reducing wages on its termination.

WAGES AND HOURS OF LABOR.

RATES OF WAGES PAID TO WORKERS PLACED BY EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918.

In the following table are shown the prevailing rates of wages paid to workers in 33 selected occupations placed in employment by public employment offices on the last day of February, 1918, or the day nearest the last day in February on which workers were placed. Reports from 127 employment offices in 39 States and the District of Columbia were tabulated as follows: Thirty-nine Federal employment offices, 3 Federal-municipal employment offices, 11 Federal-State employment offices, 1 Federal-State-county employment office, 1 Federal-State-county-municipal employment office, 1 Federal-State-municipal employment office, 46 State employment offices, 1 State-county-municipal employment office, 18 State-municipal employment offices, 5 municipal employment offices, and 1 municipal-private employment office.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT

[Fed.=Federal; Sta.=State; Co.=County; Mun.=Municipal; Pri.=

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Alabama:					
Mobile (Fed.)	$4.50 d.	$4.50 d.	$4.00 d.	$4.95 d.	
Arkansas:					
Little Rock (Fed.)	.50 h.	.52 h.		.60 h.	$5.00 d.
California:					
Eureka (Fed.)				4.50 d.	
Los Angeles (Sta.-Mun.)	4.50 d.	.50 h.	6.00 d.	4.50 d.	.30 h.
Sacramento (Fed.)					
San Diego (Fed.)				4.00–5.00 d.	.30 h.
San Francisco (Fed.)	5.80 d.	5.80 d.		[3] 6.50 d.	[1] 30.00 m.
Santa Barbara (Fed.)				4.50 d.	
Colorado:					
Colorado Springs (Sta.)	4.00 d.			.75 h.	.30 h.
Denver No. 1 (Sta.)					.25 h.
Denver No. 2 (Sta.)				.60 h.	
Pueblo (Sta.)	3.75 d.			.52½ h.	.25 h.
Connecticut:					
Bridgeport (Fed.-Sta.)	.55 h.				.25 h.
Hartford (Sta.)					.25 h.
New Haven (Sta.)					.25 h.
Norwich (Sta.)					2.00 d.
Waterbury (Sta.)					[1] 30.00 m.
Delaware:					
Wilmington (Fed.-Mun.)				.62½ h.	
District of Columbia:					
Washington (Fed.)				.62½ h.	.20 h.
Florida:					
Jacksonville (Fed.)				.42–.50 h.	
Key West (Fed.)				.50 h.	
Miami (Fed.)					
Georgia:					
Atlanta (Fed.-Sta.)	50.00 m.	.50 h.	.60 h.	.50 h.	1.00 d.
Savannah (Fed.)	4.00 d.	4.00 d.	5.00 d.	4.00 d.	1.00 d.
Idaho:					
Moscow (Fed.)					
Illinois:					
Chicago (Fed.)	.50 h.	.50 h.	6.00 d.	.70 h.	
Chicago (Sta.)	.40 h.	.42½ h.	.50 h.	.50 h.	2.10 d.
East St. Louis (Sta.)	.48 h.	.50 h.	.87½ h.	.70 h.	.15 h.
Peoria (Sta.)	75.00 m.			.60 h.	2.10 d.
Rockford (Sta.)		.45 h.	.75 h.	.62½ h.	.25 h.
Rock Island-Moline (Sta.)	.65 h.	.52–.75 h.	.75 h.	.62½ h.	.25 h.
Springfield (Sta.)	.50 h.	.60 h.	.65 h.	.55 h.	1.50 d.
Indiana:					
Evansville (Sta.)					
Fort Wayne (Sta.)	.45 h.	.52 h.	.70 h.	.50 h.	.20 h.
Indianapolis (Fed.)				.50 h.	6.00 w.
Indianapolis (Sta.)				3.50–5.50 d.	1.50 d.
South Bend (Sta.)					2.00 d.
Terre Haute (Sta.)	.50 h.			.55 h.	
Iowa:					
Des Moines (Fed.-Sta.)					
Kansas:					
Topeka (Sta.)	.48 h.	.52 h.	.75 h.	.60 h.	.20 h.
Kentucky:					
Louisville (Sta.)	.40 h.				
Louisville (Mun.-Pri.)				.50 h.	
Maryland:					
Baltimore (Fed.)	.37–.66 h.	.46–.59 h.	.75 h.	.62½ h.	42.00 m.
Massachusetts:					
Boston (Sta.)	.45 h.	.47–.60 h.	3.60 d.	4.00 d.	.20–.25 h.
Springfield (Sta.)	.50 h.	.47–.60 h.	.56 h.	22.00–25.00 w.	10.00 w.
Worcester (Sta.)	.50 h.			.54 h.	.22½ h.
Michigan:					
Battle Creek (Sta.)		.45 h.		.60 h.	.25 h.
Bay City (Sta.)					
Detroit (Sta.)	.50 h.	.65 h.	.70–.75 h.	.45–.65 h.	.25 h.
Flint (Sta.)	.55 h.	.50 h.	.65 h.	.55 h.	.25 h.
Grand Rapids (Sta.)				.60 h.	.20 h.
Jackson (Sta.)	.45 h.	.45 h.	.75 h.	.55 h.	.25 h.
Kalamazoo (Sta.)				.55 h.	.30 h.
Lansing (Sta.)				.60 h.	1.25 d.
Muskegon (Sta.)					
Saginaw (Sta.)					2.00 d.

[1] And board. [2] And found. [3] Ship carpenters.

BY EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918.

Private; h.=hour; d.=day; w.=week; m.=month; y.=year.]

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
		$2.00 d.	$2.00 d.	[1] $30.00 m.	$2.00 d.
$14.00 w.	$30.00 m.	3.00 d.		[1] 30.00 m.	.30 h.
2.25 d.				2.85 d.	
18.00 w.	40.00 m.	2.75 d.		1.75 d.	
[1] 60.00–80.00 m.	[1] 30.00–40.00 m.	2.75 d.		[2] 40.00 m.	
[2] 60.00 m.	40.00 m.	[1] 2.00 d.	3.50 d.	[2] 60.00 m.	
				[1] 45.00 m.	
70.00 m.	40.00 m.	3.00 d.		40.00 m.	
50.00 m.	40.00 m.	3.00 d.		40.00 m.	
	45.00 m.	3.50 d.		[4] 50.00 m.	.50 h.
35.00 m.	8.00 w.	80.00 m.		[4] 35.00 m.	
21.00 w.	30.00–35.00 m.	18.00 w.	.30 h.	35.00 m.	
18.00 w.		15.00 w.		45.00 m.	
15.00 w.	10.00 w.	15.00 w.		45.00 m.	
				35.00 m.	
21.00 w.				25.00 m.	
	7.00 w.			35.00 m.	
50.00 m.	25.00 m.	15.00 w.		40.00 m.	
60.00 m.				1.50– 1.75 d.	
25.00–50.00 m.	20.00 m.			25.00 m.	
1.50 d.	.75 d.	1.50 d.	2.50 d.	1.50 d.	1.75 d.
				50.00 m.	
	9.00–15.00 w.	3.00– 4.00 d.	.30– .35 h.	40.00–50.00 m.	.45 h.
[4] 14.00 w–50.00 m.	[4] 60.00 m.	16.00 w.		30.00–50.00 m.	.45 h.
10.00 w.	6.00 w.	3.00 d.	3.00 d.	35.00 m.	.50 h.
15.00 w.	1.00 d.	15.00 w.		35.00 m.	
12.00–15.00 w.	10.00–12.00 w.	.35– .40 h.		45.00–65.00 m.	.45– .50 h.
18.00–25.00 w.	10.00 w.	3.00 d.	6.00 d.	45.00–60.00 m.	.42½ h.
12.00 w.	7.00 w.	3.00 d.		35.00–50.00 m.	
		2.00 d.		30.00 m.	
	10.00 w.	18.00 w.		30.00–35.00 m.	.45 h.
	[4] 8.00 w.	.25 h.		[5] 35.00 m.	
8.00–20.00 w.	6.00–10.00 w.	.25 h.		30.00–40.00 m.	
		16.00 w.		30.00 m.	
		18.00 w.		30.00–35.00 m.	
				50.00 m.	
60.00–90.00 m.	25.00–40.00 m.	.25 h.		30.00–50.00 m.	
10.00 w.	5.00 w.			1.00 d.	
60.00 m.		2.00 d.		[5] 35.00 m.	
[1] 20.00–30.00 m.	44.00 m.		.25 h.	1.50 d.	
[1] 2.50 d.	10.00–15.00 w.	3.00 d.	3.00 d.	[4] 40.00 m.	3.44 d.
15.00 w.		15.00–17.00 w.		30.00–35.00 m.	
	[1] 12.00 w.	.30 h.		[4] 35.00 m.	
14.00 w.	8.00 w.	18.00 w.		25.00–40.00 m.	
				28.00–35.00 m.	
12.00–14.00 w.	10.00–12.00 w.	3.50 d.	.35 h.	35.00 m.	.40 h.
25.00 w.	12.00 w.	.30 h.		35.00 m.	.35 h.
	10.00 w.	15.00 w.		35.00 m.	
60.00–80.00 m.	50.00–75.00 m.	2.70 d.	.31 h.	30.00–50.00 m.	.33 h.
15.00 w.	12.00 w.	3.00 d.		30.00–40.00 m.	
[1] 100.00 m.	[1] 75.00 m.	.35 h.		[1] 50.00 m.	
	6.00 w.			20.00 m.	

[4] And room and board.

[5] And house, garden, etc.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Alabama:					
Mobile (Fed.)	$5.00 w.	$3.50 d.	$2.75 d.		
Arkansas:					
Little Rock (Fed.)	5.00 w.	.75 h.	.30 h.		$8.00 w.
California:					
Eureka (Fed.)			3.20 d.		
Los Angeles (Sta.-Mun.)	30.00 m.	4.50 d.	2.50- 3.00 d.	$16.00 w.	10.00 w.
Sacramento (Fed.)					
San Diego (Fed.)	35.00-40.00 m.		2.75 d.		8.00- 9.00 w.
San Francisco (Fed.)	35.00 m.	.45 h.	3.00 d.		10.00 w.
Santa Barbara (Fed.)			3.25 d.		
Colorado:					
Colorado Springs (Sta.)	30.00 m.		.35 h.		
Denver No. 1 (Sta.)	40.00 m.		2.50 d.		
Denver No. 2 (Sta.)			.35 h.		9.50 w.
Pueblo (Sta.)	5.00 w.		.35 h.		
Connecticut:					
Bridgeport (Fed.-Sta.)	30.00 m.		.30- .35 h.	.30 h.	.25 h.
Hartford (Sta.)	6.00 w.		.40 h.	15.00 w.	.25 h.
New Haven (Sta.)	8.00 w.		3.25 d.	15.00 w.	15.00 w.
Norwich (Sta.)	30.00 m.	18.00 w.	3.25 d.		
Waterbury (Sta.)	22.50 m.				
Delaware:					
Wilmington (Fed.-Mun.)	5.00- 6.00 w.		.30- .40 h.		
District of Columbia:					
Washington (Fed.)	20.00-25.00 m.		.35 h.		
Florida:					
Jacksonville (Fed.)			2.00- 2.20 d.		
Key West (Fed.)					
Miami (Fed.)					
Georgia:					
Atlanta (Fed.-Sta.)	4.00 w.		2.00 d.		
Savannah (Fed.)	1.00 d.	3.00 d.	2.00 d.	1.00 d.	0.75 d.
Idaho:					
Moscow (Fed.)	5.00 w.		3.60 d.		
Illinois:					
Chicago (Fed.)	7.00-10.00 w.		.27- .35 h.		9.00 w.
Chicago (Sta.)	6.00-10.00 w.	3.50- 5.00 d.	.25- .50 h.		2.10- 2.60 d.
East St. Louis (Sta.)	5.00 w.	.75 h.	3.00 d.	20.00 w.	9.00 w.
Peoria (Sta.)	5.00 w.		.30 h.		2.10 d.
Rockford (Sta.)	6.00 w.	.65- .75 h.	.45- .50 h.	12.00-14.00 w.	8.00 w.
Rock Island-Moline (Sta.)	7.00 w.	.62½ h.	3.50 d.	17.25 w.	9.00 w.
Springfield (Sta.)	30.00-40.00 m.		.23- .50 h.	2.00 d.	1.00 d.
Indiana:					
Evansville (Sta.)	4.00 w.		2.00 d.		
Fort Wayne (Sta.)			.30 h.		
Indianapolis (Fed.)	[1] 6.00 w.		.30 h.		6.00 w.
Indianapolis (Sta.)	12.00 m.		2.75 d.		
South Bend (Sta.)	5.00 w.		.30 h.		
Terre Haute (Sta.)			.25-.30 h.	18.00 w.	
Iowa:					
Des Moines (Fed.-Sta.)			.32½ h.		
Kansas:					
Topeka (Sta.)	5.00-8.00 w.	0.60 h.	.25 h.	15.00 w.	4.00-6.00 w.
Kentucky:					
Louisville (Sta.)			.22-.30 h.		
Louisville (Mun.-Pri.)	[2] 6.00 w.		2.00 d.		1.00 d.
Maryland:					
Baltimore (Fed.)	5.00 w.	.46-.59 h.	.25-.32 h.		
Massachusetts:					
Boston (Sta.)	3.00-10.00 w.	.40 h.	3.00 d.	15.00 w.	7.00-10.00 w.
Springfield (Sta.)	5.00- 6.00 w.	.50-.55 h.	.30-.35 h.		
Worcester (Sta.)	[1] 5.00- 7.00 w.	.45 h.	3.00 d.		
Michigan:					
Battle Creek (Sta.)	5.00- 6.00 w.		.30 h.	18.00 w.	8.00-12.00 w.
Bay City (Sta.)	3.00- 4.50 w.		.25-.30 h.		
Detroit (Sta.)	8.00 w.	.35-.71 h.	.35-.40 h.	18.00 w.	15.00 w.
Flint (Sta.)	5.00 w.	.45 h.	.30 h.	3.00 d.	1.50 d.
Grand Rapids (Sta.)	3.00- 5.00 w.		.30 h.		
Jackson (Sta.)	5.00- 8.00 w.	50.00-55.00 m.	.30- .35 h.	18.00-25.00 w.	9.00-12.00 w.
Kalamazoo (Sta.)			3.00- 4.00 d.		8.00 w.
Lansing (Sta.)	[2] 8.00 m.	.70 h.	.40 h.	20.00 w.	14.00 w.
Muskegon (Sta.)			.30 h.		
Saginaw (Sta.)			2.75 d.		

[1] And room and board.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$4.50 d.	$3.00 d.	$5.50 d.	.....	$5.00 d.	.....
.52 h.	.65 h.	.65 h.	$6.00 d.	.75 h.	$8.00 w.
.....	.....	.....	.....	.....	.....
5.00 d.	.50 h.	3.50 d.	5.00 d.	5.00 d.	10.00 w.
5.80 d.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
5.80 d.	5.80 d.	5.50 d.	.....	.....	12.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.60 h.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.50 h.	.....	.....	.....	.....	8.00 w.
.62 h.	.....	.50 h.	.....	.....	.....
.45 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.55 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.59½ h.	.....	.60 h.	.....	.60 h.	.....
.62½ h.	.....	.62½ h.	.....	.....	15.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.60 h.	.55 h.	.45 h.	.60 h.	.65 h.	.....
.52½ h.	.62½ h.	4.00 d.	4.00 d.	5.00 d.	10.00 w.
5.84 d.	5.84 d.	.....	.....	.....	.....
.45- .65 h.	4.00 d.	.70 h.	6.00 d.	6.00 d.	8.00-12.00 w.
.55 h.	.....	70.00 m.	.....	.....	8.00-12.00 w.
.51 h.	.58 h.	.60 h.	.87½ h.	.87½ h.	8.00 w.
.40 h.	5.00 d.	.....	.....	.....	.....
.35- .45 h.	.35- .40 h.	.50- .55 h.	.62½ h.	.75 h.	8.00 w.
4.00- 6.00 d.	4.00- 8.00 d.	.55 h.	.75 h.	5.45 d.	10.00 w.
.45 h.	.45 h.	.50 h.	.65 h.	8.00-10.00 w.	10.00 w.
.....	.....	.....	.....	.....	.....
.45- .50 h.	4.10 d.	.....	.....	.65 h.	.....
.60 h.	.....	.....	.....	.....	.....
3.00- 5.00 d.	.....	.35-$0.50 h.	.....	5.00 d.	.....
.55 h.	4.00 d.	.....	.....	.....	.....
.50 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.45 h.	.55 h.	.50 h.	.75 h.	.62½ h.	7.00 w.
.45 h.	.....	.....	.....	.....	6.00 w.
.40 h.	.....	.....	.....	.....	.....
.46-.59 h.	.....	.....	.....	.....	.....
.48 h.	.37 h.	.44 h.	20.00 w.	20.00 w.	7.00-8.50 w.
.55-.60 h.	.....	.50 h.	.....	.65 h.	.....
.40-.60 h.	.....	.....	.....	.47-.60 h.	.....
.35-.60 h.	.45 h.	.....	.....	.....	6.00-7.00 w.
.60 h.	.....	.....	.....	.....	.....
.40 h.	.....	4.00 d.	.70 h.	.60-.70 h.	12.00 w
.45 h.	.60 h.	.55 h.	.55 h.	.65 h.	10.00 w.
.....	.....	.....	.....	.....	8.00 w.
.45 h.	4.50 d	.40- .45 h.	.50- .60 h.	.60 h.	6.00-12.00 w.
.60 h.	.....	.....	.....	.....	.....
.50 h.	.55 h.	.60 h.	.70 h.	.75 h.	15.00 w.
.....	.....	.....	.....	.....	.....
3.72 d.	.....	.....	.....	.....	.....

[1] And board.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Alabama:					
Mobile (Fed.)				$90.00 m.	$70.00 m.
Arkansas:					
Little Rock (Fed.)				100.00 m.	85.00 m.
California:					
Eureka (Fed.)					
Los Angeles (Sta.-Mun.)	$2.00 d.			75.00 m.	75.00 m.
Sacramento (Fed.)					
San Diego (Fed.)					60.00 m.
San Francisco (Fed.)	2.00 d.			93.50 m.	75.00 m.
Santa Barbara (Fed.)					
Colorado:					
Colorado Springs (Sta.)	1.00 d.				40.00 m.
Denver No. 1 (Sta.)					
Denver No. 2 (Sta.)					
Pueblo (Sta.)	1.00 d.				8.00 w.
Connecticut:					
Bridgeport (Fed.-Sta.)					
Hartford (Sta.)					
New Haven (Sta.)					
Norwich (Sta.)					
Waterbury (Sta.)				15.00 w.	
Delaware:					
Wilmington (Fed.-Mun.)					
District of Columbia:					
Washington (Fed.)	2.00 d.			1,100.00 y.	1,100.00 y.
Florida:					
Jacksonville (Fed.)					
Key West (Fed.)					
Miama (Fed.)					10.00 w.
Georgia:					
Atlanta (Fed.-Sta.)	15.00 w.				20.00 w.
Savannah (Fed.)	1.75 d.	$2.00 d.	$1.75 d.	75.00 m.	60.00 m.
Idaho:					
Moscow (Fed.)					
Illinois:					
Chicago (Fed.)	7.00– 9.00 w.		9.00–25.00 w.	18.00 w.	12.00–18.00 w.
Chicago (Sta.)				50.00–100.00 m.	8.00–20.00 w.
East St. Louis (Sta.)	.20 h.	30.00 w.	.20 h.	90.00 m.	75.00 m.
Peoria (Sta.)	2.00 d.				
Rockford (Sta.)	2.00 d.				35.00–45.00 m.
Rock Island-Moline (Sta.)	2.00 d.	100.00 m.	1.50 d.	80.00–100.00 m.	75.00 m.
Springfield (Sta.)	2.00 d.			60.00–100.00 m.	40.00–60.00 m.
Indiana:					
Evansville (Sta.)					
Fort Wayne (Sta.)					10.00 w.
Indianapolis (Fed.)	2.00 d.		6.00 w.		16.00 w.
Indianapolis (Sta.)				60.00-100.00 m.	
South Bend (Sta.)					
Terre Haute (Sta.)					
Iowa:					
Des Moines (Fed.-Sta.)					
Kansas:					
Topeka (Sta.)	10.00 w.			70.00 m.	60.00 m.
Kentucky:					
Louisville (Sta.)					5.00–10.00 w.
Louisville (Mun.-Pri.)			1.00 d.		10.00 w.
Maryland:					
Baltimore (Fed.)	1.25 d.		10.00 w.	60.00–125.00 m.	15.00 w.
Massachusetts:					
Boston (Sta.)	1.50–2.50 d.			12.00–18.00 w.	8.00–20.00 w.
Springfield (Sta.)				20.00 w.	
Worcester (Sta.)				12.00–14.00 w.	8.00 w.
Michigan:					
Battle Creek (Sta.)				65.00 m.	10.00–12.00 w.
Bay City (Sta.)					
Detroit (Sta.)			2.50 d.		
Flint (Sta.)	.25 h.	.35 h.	.20 h.	80.00 m.	60.00 m.
Grand Rapids (Sta.)					
Jackson (Sta.)	8.00–15.00 w.		8.00–15.00 w.	8.00–20.00 w.	8.00–20.00 w.
Kalamazoo (Sta.)					
Lansing (Sta.)	.25 h.			100.00 m.	75.00 m.
Muskegon (Sta.)					
Saginaw (Sta.)					

[1] And found. [2] And board. [3] $27.50 per month with room and board.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
$4.00 d.				$1.75 d.	
65.00 m.	$8.00 w.	$8.00 w.	$7.00 w.		
	60.00 m.		8.00 w.	.30 h.	$1.00 d.
	30.00 m.	9.00–12.00 w.	9.00 w.	.30 h.	.25– .30 h.
5.80 d.	11.00 w.	[1] 42.00 m.	10.00 w.	2.50 d.	
				2.25 d.	
			25.00 m.	.35 h.	.25 h.
		40.00 m.	35.00 m.	2.50 d.	2.00 d.
			10.00 w.	.35 h.	2.50 d.
			10.00 w.	.35 h.	.25 h.
		12.00 w.	10.00 w.	.25– .30 h.	.25 h.
		30.00 m.		.40 h.	.25 h.
			7.00 w.	3.25 d.	.25 h.
		12.00 w.	7.00 w.	3.25 d.	2.00 d.
				2.50 d.	2.50 d.
				.41½ h.	.25 h.
	50.00 m.	40.00 m.	[2] 20.00 m.	.35 h.	1.25 d.
.60 h.					
5.00 d.	2.00 d.	1.75 d.	1.50 d.	1.50 d.	1.00 d.
5.54 d.				2.50 d.	1.50 d.
.70 h.	9.00–14.00 w.		[3] 9.00–10.00 w.	.28– .35 h.	2.10– 2.35 d.
.70 h.	8.00–12.00 w.	[2] 8.00–12.00 w.	[2] 8.00–10.00 w.	.30– .50 h.	.25– .30 h.
.70 h.	10.00 w.	18.00 w.	8.00 w.	.30 h.	.15 h.
		10.00 w.	8.00 w.		
		12.00 w.	1.50 d.	.25– .35 h.	.20– .25 h.
.62½ h.	18.00 w.	12.00 w.	9.00 w.	3.00– 3.58 d.	.25 h.
	24.00 m.	12.00 w.	6.00 w.		
.45 h.			1.00 d.	0.25– .30 h.	1.50 d.
			6.00 w.	.25 h.	1.60 d.
		15.00 w.	8.00 w.		.30 h.
			6.00 w.		
				.25– .35 h.	
	22.50 m.	10.00 w.	3.00–5.00 w.	.30 h.	.20 h.
		5.00 w.		2.00 d.	1.10 d.
	8.00 w.		32.50 m.		6.00 w.
.47–.60 h.	12.00–15.00 w.	[2] 2.00 d.	[4] 7.00 w.	.27 h.	.20 h.
.47–.60 h.			[2] 5.00 w.	.30 h.	[5] .20 h.
			[6] 30.00 m.	.30 h.	.25 h.
		8.00 w.	8.00 w.		
				.30– .40 h.	
.65–.70 h.	12.00–15.00 w.	[2] 9.00 w.	7.00 w.	.35 h.	.25 h.
60.00 m.	9.00 w.	9.00 w.	7.00 w.	.32½ h.	.25 h.
		6.00 w.		.30 h.	.20 h.
6.00– 7.00 d.	8.00–10.00 w.	9.00 w.	7.00– 8.00 w.	.30– .35 h.	.25 h.
			8.00 w.		
	15.00 w.	[2] 20.00 m.	[2] 15.00 m.	4.00 d.	2.25 d.

[4] And board at restaurants; $20 per month and room and board at hotels.
[5] And carfare.
[6] And room and board.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Minnesota:					
Minneapolis (Fed.)	$3.00–4.00 d.	$0.40–.60 h.	$0.75 h.	$0.55 h.	$0.35 h.
Missouri:					
Kansas City (Fed.-Sta.)	.40 h.	.50–.60 h.	7.00 d.	.50–.65 h.	.30 h.
St. Joseph (Sta.)	4.00 d.		.80 h.	.60 h.	.25 h.
St. Louis (Fed.-Sta.)				.50–.62½ h.	1.60 d.
Montana:					
Butte (Sta.)					.35 h.
Helena (Fed.)	4.00 d.	4.40 d.	8.00 d.	6.00 d.	3.00 d.
Nebraska:					
Lincoln (Fed.-Sta.)					
Omaha (Fed.-Sta.-Co.-Mun.)					.25 h.
Nevada:					
Reno (Fed.)					
New Jersey:					
Newark (Fed.-Sta.-Mun.)	18.00–25.00 w.		3.75 d.	.62½ h.	.25 h.
New Mexico:					
Deming (Fed.)				.75 h.	
New York:					
Buffalo (Fed.)					
Ohio:					
Akron (Sta.-Mun.)	.50 h.	.50 h.	.75 h.	.65 h.	.25 h.
Athens (Sta.)				.65 h.	
Canton (Sta.-Mun.)	.40 h.	.50 h.	.75 h.	.60 h.	.25 h.
Chillicothe (Sta.-Mun.)	.50 h.	.50 h.		.60 h.	1.50 d.
Cincinnati (Sta.-Mun.)	.42½ h.	.50 h.	.80 h.	.62½ h.	1.60 d.
Cleveland (Fed)	.50 h.	.62½ h.	.80 h.	.70 h.	2.00 d.
Cleveland (Sta.-Mun.)	.45–.65 h.	.45–.55 h.	.60–.75 h.	.45–.60 h.	.25 h.
Columbus (Sta.-Mun.)		.50 h.		.55–.60 h.	1.60 d.
Dayton (Sta.-Mun.)	.40 h.		.80 h.	.60 h.	1.60 d.
Hamilton (Sta.-Mun.)	.45 h.				1.25 d.
Lima (Sta.)		.47½ h.	.80 h.	.40 h.	.20 h.
Mansfield (Sta.)	.40 h.	80.00 m.	.70 h.	.50 h.	1.50 d.
Marietta (Sta.)				.45–.50 h.	1.00 d.
Marion (Sta.-Mun.)	.35–.40 h.	.37–.45 h.	.75 h.	.50 h.	.20 h.
Portsmouth (Sta.)	.51½ h.			.45 h.	1.50 d.
Sandusky (Sta.-Co.-Mun.)	4.00 d.				1.50 d.
Springfield (Sta.-Mun.)	.45 h.	.40–.50 h.	.70 h.	.55 h.	1.50 d.
Steubenville (Sta.-Mun.)	.40 h.	.50 h.	.75 h.	.65 h.	2.00 d.
Tiffin (Sta.-Mun.)	3.75 d.		.65 h.	.45 h.	1.00 d.
Toledo (Sta.-Mun.)	.50 h.	.50 h.	.70 h.	.55 h.	.25 h.
Washington C.H. (Sta.-Mun.)					1.75 d.
Youngstown (Sta.-Mun.)	.45 h.	.68 h.	.80 h.	.63 h.	2.10 d.
Zanesville (Sta.-Mun.)	.40 h.	.43 h.	.70 h.	.52½ h.	1.50 d.
Oklahoma:					
Oklahoma City (Sta.)				.60 h.	.20 h.
Oregon:					
Portland (Fed.)	5.25 d.	5.25 d.	7.00 d.	5.60 d.	.30 h.
Portland (Mun.)	5.77½ d.	5.77½ d.	7.00 d.	5.60–6.60 d.	.30 h.
Pennsylvania:					
Erie (Fed.-Sta.) [2]	.45 h.		.75 h.	.55 h.	
Harrisburg (Sta.) [2]	.35–.45 h.	.35–.45 h.	.65–.75 h.	.62½ h.	1.50 d.
Johnstown (Fed.-Sta.) [2]	.42 h.		.70 h.	.55 h.	[1] 1.50 d.
Philadelphia (Fed.)	.40–.50 h.	.36–.44 h.	.70 h.	.60 h.	7.00–10.00 w.
Philadelphia (Sta.) [3]	.66 h.	.66 h.	.75 h.	.65 h.	6.00 w.
Pittsburgh (Fed.)	.60 h.	.55 h.	.65 h.	.60 h.	.25 h.
Pittsburgh (Fed.-Sta.-Co.) [2]	.55–.65 h.	.55–.65 h.	.60–.75 h.	.50–.75 h.	.22–.25 h.
Scranton (Fed.-Sta.) [2]	3.75 d.		.80 h.	.70 h.	1.50 d.
York (Fed.-Sta.) [2]					
Rhode Island:					
Providence (Fed.)	.47–.60 h.			.44–.60 h.	
Providence (Sta.)	.47–.60 h.	.47–.60 h.			.15–.25 h.
South Carolina:					
Charleston (Fed.)				3.50 d.	
Tennessee:					
Memphis (Fed.)				.45 h.	

[1] And room and board. [2] And board. [3] January report.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$60.00–75.00 m.	$7.00–15.00 w.	$15.00–18.00 w.	$2.50–3.00 d.	$20.00–50.00 m.	$0.50 h.
14.00–18.00 w.	6.00–10.00 w.	14.00–16.00 w.		30.00–60.00 m.	.45 h.
12.00–18.00 w.	8.00–15.00 w.	2.50– 3.00 d.		40.00–60.00 m.	.50 h.
[1] 75.00 m.	[1] 25.00–35.00 m.			[1] 30.00 m.	
21.00 w.	17.50 w.			50.00 m.	
26.50 w.	21.00 w.	3.75 d.		45.00 m.	6.00 d.
				[1] 45.00–50.00 m.	
75.00 m.	9.00 w.	18.00 w.		40.00 m.	
				1.50 d.	
15.00–22.00 w.	30.00–40.00 m.	15.00–18.00 w.			
60.00 m.					
				30.00–50.00 m.	
20.00 w.	15.00 w.	3.00 d.		35.00 m.	.50 h.
				2.00 d.	
15.00 w.	8.00 w.	18.00 w.	.30 h.	30.00–40.00 m.	.50 h.
20.00 w.	8.00 w.	.30 h.		1.00– 1.50 d.	
.40 h.	8.00 w.	16.50 w.		[1] 30.00 m.	.43 h.
25.00–30.00 w.	18.00–20.00 w.	18.00 w.	.35 h.	30.00–50.00 m.	.45 h.
[1] 40.00–60.00 m.	[1] 40.00–50.00 m.	18.00–22.00 w.	.40–.45 h.	30.00–60.00 m.	.50 h.
	50.00 m.	2.50 d.		[1] 30.00–35.00 m.	
		3.00 d.		25.00–35.00 m.	.35 h.
	5.00 w.	15.00 w.		35.00 m.	
75.00 m.	12.00 w.	55.00 m.		30.00–40.00 m.	.35 h.
12.00–15.00 w.	6.00–10.00 w.	16.00–18.00 w.		30.00–35.00 m.	.40 h.
				25.00–45.00 m.	
60.00–70.00 m.	25.00–35.00 m.	.25 h.		30.00–40.00 m.	.35 h.
		.27½ h.		45.00 m.	
		3.00 d.		45.00 m.	
15.00–20.00 w.	5.00–7.00 w.	.30 h.		30.00–40.00 m.	.40 h.
14.00 w.	12.00 w.	18.00 w.		40.00 m.	.45 h.
15.00 w.		2.75 d.		40.00 m.	
[2] 15.00 w.	[2] 10.00 w.	17.00 w.		[1] 35.00 m.	.40 h.
				1.25 d.	
90.00 m.	70.00 m.	3.50 d.		40.00 m.	.40 h.
20.00 w.		2.75 d.		25.00–40.00 m.	.40 h.
15.00 w.	8.00 w.	2.25 d.		30.00 m.	
75.00–100.00 m.	40.00–80.00 m.	2.75–3.50 d.	.60–1.00 h.	40.00–60.00 m.	4.50 d.
80.00–125.00 m.	50.00–80.00 m.	2.75–3.50 d.	6.00 d.	40.00–60.00 m.	4.50 d.
10.00 w.		.40 h.	.45 h.	80.00 m.	
15.00–18.00 w.	6.00–15.00 w.	15.00 w.	.38½ h.	25.00–35.00 m.	.35 h.
[1] 75.00 m.	[1] 65.00 m.	70.00 m.		[1] 1.50 d.	
90.00 m.	8.00–15.00 w.	55.00–60.00 m.	.35 h.	35.00–60.00 m.	
75.00 m.	7.50 w.	17.00 w.	.32½ h.	35.00 m.	.45 h.
20.00 w.	15.00 w.	3.50 d.		[5] 40.00 m.	
15.00–20.00 w.	[1] 30.00–45.00 m.	16.00–20.00 w.		[1] 30.00–45.00 m.	.40–.50 h.
20.00 w.	8.00 w.	15.00 w.		25.00 m.	
			.25 h.	[2] 35.00 m.	
8.00–16.00 w.	7.00–12.00 w.	12.00–17.00 w.		20.00–30.00 m.	
20.00 w.				32.50 m.	

[4] And carfare and dinner.

[5] And board and room and washing.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Minnesota:					
Minneapolis (Fed.)	$5.00- 9.00 w.	$0.62½ h.	$2.50 d.	$15.00-18.00 w.	$7.00 w.
Mississippi:					
Gulfport (Fed.)			.25 h.		
Missouri:					
Kansas City (Fed.-Sta.)	5.00- 7.00 w.	.60 h.	.30- .45 h.	15.00 w.	5.00- 9.00 w.
St. Joseph (Sta.)	4.00- 8.00 w.		.25- .40 h.	15.00-18.00 w.	7.00-12.00 w.
St. Louis (Fed.-Sta.)	[1] 18.00-25.00 m.		.35 h.		1.60 d.
Montana:					
Butte (Sta.)	30.00-35.00 m.		4.25 d.		
Helena (Fed.)	35.00-40.00 m.	5.25 d.	3.50 d.	24.00 w.	18.00 w.
Nebraska:					
Lincoln (Fed.-Sta.)			.30 h.		
Omaha (Fed.-Sta.-Co.-Mun.)	7.00 w.		.30 h.		9.00 w.
Nevada:					
Reno (Fed.)	30.00 m.		3.10 d.		
New Jersey:					
Newark (Fed.-Sta.-Mun.)			.29½- .37½ h.		
New Mexico:					
Deming (Fed.)			60.00 m.		
New York:					
Buffalo (Fed.)			.25- .40 h.		
Ohio:					
Akron (Sta.-Mun.)	7.00 w.	0.55 h.	.35 h.	18.00 w.	9.00 w.
Athen (Sta.)			.35 h.		
Canton (Sta.-Mun)	6.00 w.	.40 h.	.32½ h.	18.00 w.	8.00 w.
Chillicothe (Sta.-Mun.)		.60 h.	.35 h.	14.00 w.	8.00 w.
Cincinnati (Sta.-Mun.)	[1] 30.00 m.	.62½ h.	.27 h.	16.00 w.	10.00 w.
Cleveland (Fed.)	7.00-10.00 w.	.78½ h.	.35-.45 h.		
Cleveland (Sta.-Mun.)	5.00-10.00 w.	.45-.50 h.	.35-.50 h.		9.00-10.00 w.
Columbus (Sta.-Mun.)	6.00 w.		.30 h.		
Dayton (Sta.-Mun.)	5.00 w.	.55 h.	.30-.35 h.		
Hamilton (Sta.-Mun.)	4.50 w.		.30 h.		6.00 w.
Lima (Sta.)		.42½ h.	.30 h.	.25 h.	.20 h.
Mansfield (Sta.)	5.50 w.	.39 h.	.40 h.	14.00 w.	8.00 w.
Marietta (Sta.)	3.50-5.00 w.		.25 h.	1.00 d.	1.00 d.
Marion (Sta.-Mun.)	5.00 w.	.40 h.	.30-.35 h.		
Portsmouth (Sta.)	5.00 w.		.27½ h.		6.00 w.
Sandusky (Sta.-Co.-Mun.)			.30 h.		
Springfield (Sta.-Mun.)	5.00 w.		.30 h.	15.00-18.00 w.	6.00-7.00 w.
Steubenville (Sta.-Mun.)	7.00 w.	.62½ h.	.30 h.		
Tiffin (Sta.-Mun.)	1.00 d.	125.00 m.	2.75 d.		1.25 d.
Toledo (Sta.-Mun.)	[1] 5.00 w.	.62½ h.	.30 h.	15.00 w.	8.00 w.
Washington C.H. (Sta.-Mun.)			.25h.		5.00 w.
Youngstown (Sta.-Mun.)	7.00 w.	.68 h.	.35h.	80.00 m.	9.00 w.
Zanesville (Sta.-Mun.)	4.50-6.00 w.	3.25 d.	2.50d.	17.50 w.	10.25 w.
Oklahoma:					
Oklahoma City (Sta.)	5.00 w.		.30 h.		
Oregon:					
Portland (Fed.)	30.00-40.00 m.	4.50 d.	.35 h.	15.00-21.00 w.	8.64-12.00 w.
Portland (Mun.)	25.00-40.00 m.	4.50-5.77½ d.	3.57½ d.	15.00-21.00 w.	8.64-15.00 w.
Pennsylvania:					
Erie (Fed.-Sta.) [2]			.40 h.		
Harrisburg (Sta.) [2]	5.00-10.00 w.	.25-.35 h.	.30 h.	12.00-15.00 w.	6.00 w.
Johnstown (Fed.-Sta.) [2]	5.00 w.		.30-.35 h.	18.00 w.	6.00 w.
Philadelphia (Fed.)	6.00-10.00 w.	.45 h.	.32-.40 h.		6.00-12.00 w.
Philadelphia (Sta.) [2]	7.00 w.	.50 h.	.35 h.		6.50 w.
Pittsburgh (Fed.)	7.00 w.	.45 h.	.35 h.	15.00 w.	10.00 w.
Pittsburgh (Fed.-Sta.[1] Co.) [2]	[1] 20.00-30.00 m.	.40-.45 h.	.33-.35 h.		
Scranton (Fed.-Sta.) [2]	6.00 w.		.30 h.		
York (Fed.-Sta.) [2]			2.25-2.50 d.		
Rhode Island:					
Providence (Fed.)			.30-.40 h.		
Providence (Sta.)	4.00-8.00 w.		.25-.37 h.		
South Carolina:					
Charleston (Fed.)			1.75 d.		
Tennessee:					
Memphis (Fed.)			.27½ h.		

[1] And room and board.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$3.00- 4.00 d.	$3.00- 4.00 d.	$0.55 h.	$0.75 h.	$0.52 h.	$8.00 w.
.....	.....	.....	.....	.....	.....
.50 h.	5.20 d.	.40- .65 h.	7.00 d.	6.00 d.	.....
.30- .80 h.	.....	.50 h.	.75 h.	.80 h.	6.00-10.00 w.
4.60 d.	.....	.....	.....	.....	7.00 w
.....	.....	.....	.....	.....	.....
4.40 d.	6.00 d.	6.00 d.	8.00 d.	8.00 d.	.....
.....	.....	.....	.....	.....	.....
.55 h.	.....	.....	.....	.....	9.00 w.
.....	.....	.....	.....	.....	.....
.45- .60 h.	.....	4.00 d.	.....	.75 h.	.....
.....	.....	.75 h.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.65 h.	.65 h.	.50 h.	.55 h.	5.00 d.	10.00 w.
.....	.....	.....	.....	.....	.....
.50 h.	.50 h.	.60 h.	.60 h.	.60 h.	8.00 w.
.50 h.	.....	.....	.....	.....	8.00 w.
.43 h.	.44½ h.	.55 h.	.75 h.	.65½ h.	7.00 w.
.50 .70 h.	5.50 d.	.60 h.	.75 h.	.81½ h.	10.00-15.00 w.
.40 .60 h.	.60 h.	.40-.60 h.	.40-.60 h.	.80 h.	7.00-9.00 w.
.50 .60 h.	.45 h.	.....	.....	.....	12.00 w
.60 .65 h.	4.00 d.	.40 h.	.50 h.	.62½ h.	.....
.47½ h.	4.25 d.	.25 h.	.....	.....	6.00 w.
.....	.....	.....	.....	.50 h.	8.50 w.
.45 h.	.45 h.	.....	.70 h.	.70 h.	6.00 w.
.....	.....	2.75-3.50 d.	.....	.....	.....
.35-.50 h.	.45 h.	.45 h.	.....	.....	.....
.50½ h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.30 h.	.....	.....	.....	.....	.....
.35 .45 h.	.45 h.	.45-.50 h.	.50 h.	25.00 w.	7.00-12.00 w.
.57 h.	.....	.....	.....	.65 h.	6.00 w.
.50 h.	4.00 d.	.40 h.	.....	.45 h.	20.00 w.
.50 h.	.40 h.	.50 h.	.70 h.	.62½ h.	6.00 w.
.....	.....	.....	.....	.....	6.00 w.
.60 h.	5.50 d.	.60 h.	.68 h.	.65 h.	10.00 w.
.45 h.	.45 h.	.50 h.	.62½ h.	.53 h.	12.00 w.
.....	.....	.....	.....	.....	.....
5.25 d.	5.25 d.	4.50 d.	7.00 d.	6.50 d.	8.64-15.00 w.
5.77½ d.	5.77½ d.	4.50-6.50 d.	7.00 d.	6.50 d.	8.64-15.00 w.
.40-.65 h.	.47 h.	.....	.....	.....	.....
.45-.55 h.	.35-.45 h.	.50 h.	.60 h.	.37½-.50 h.	8.00 w.
.....	.....	.....	.....	.....	.....
.72½ h.	.....	.60 h.	.....	4.00 d.	8.00 w.
.62 h.	.72½ h.	.55 h.	.70 h.	.56 h.	.....
.60 h.	.60 h.	.45 h.	.....	.75 h.	12.00 w.
.50-.65 h.	5.00-5.50 d.	.55-.60 h.	.55 h.	.60-.70 h.	12.00-17.00 w.
.42 h.	.....	.70 h.	.....	.70 h.	8.00 w.
.....	.....	.....	.....	4.00 d.	.....
.47-.60 h.	.....	.....	.....	.....	.....
.32-.60 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.75 h.	.....	.52½ h.	.....	.65 h.	.....

[a] January report.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Minnesota:					
Minneapolis (Fed.)	$8.00–40.00 w.	$18.00–35.00 w.	$12.00 w.	$18.00–21.00 w.	$40.00–75.00 m.
Mississippi:					
Gulfport (Fed.)					
Missouri:					
Kansas City (Fed.-Sta.)				65.00–100.00 m.	10.00–18.00 w.
St. Joseph (Sta.)	1.50– 2.00 d.	16.00 w.	12.00 w.		40.00–60.00 m.
St. Louis (Fed.-Sta.)	1.25– 2.00 d.		2.00 d.		65.00 m.
Montana:					
Butte (Sta.)					
Helena (Fed.)				100.00 m.	80.00 m.
Nebraska:					
Lincoln (Fed.-Sta.)					
Omaha (Fed.-Sta.-Co.-Mun.)	2.50 d.			80.00 m.	70.00 m.
Nevada:					
Reno (Fed.)					
New Jersey:					
Newark (Fed.-Sta.-Mun.)	2.00 d.			15.00–25.00 w.	10.00–18.00 w.
New Mexico:					
Deming (Fed.)					125.00 m.
New York:					
Buffalo (Fed.)					
Ohio:					
Akron (Sta.-Mun.)	2.00 d.		9.00 w.	80.00 m.	75.00 m.
Athens (Sta.)					
Canton (Sta.-Mun.)	8.00 w.		8.00 w.	25.00 w.	12.00–18.00 w.
Chillicothe (Sta.-Mun.)	10.00 w.		8.00 w.	100.00 m.	75.00 m.
Cincinnati (Sta.-Mun.)	7.50 w.	18 00 w.	12.00 w.	75.00 m.	50.00 m.
Cleveland (Fed.)	2.50 d.		12.00–15.00 w.	90.00-100.00 m.	75.00–90.00 m.
Cleveland (Sta.-Mun.)	2.00–2.50 d.	20.00–25.00 w.	9.00–15.00 w.	75.00-100.00 m.	60.00–85.00 m.
Columbus (Sta.-Mun.)	2.00 d.				6.00 m.
Dayton (Sta.-Mun.)				22.00 w.	60.00 m.
Hamilton (Sta.-Mun.)					
Lima (Sta.)	1.50–4.50 d.			60.00 m.	50.00 m.
Mansfield (Sta.)	6.00 w.		6.00 w.	75.00 m.	60.00 m.
Marietta (Sta.)					
Marion (Sta.-Mun.)					40.00 m.
Portsmouth (Sta.)					
Sandusky (Sta.-Co.-Mun.)					7.00–15.00 w.
Springfield (Sta.-Mun.)	7.00 w.			75.00–90.00 m.	40.00–65.00 m.
Steubenville (Sta.-Mun.)				100.00 m.	18.00 w.
Tiffin (Sta.-Mun.)	1.50 d.		8.00 w.		60.00 m.
Toledo (Sta.-Mun.)	.25 h.		10.00 w.	100.00 m.	10.00 w.
Washington C.H. (Sta.-Mun.)	10.00 w.		8.00 w.	15.00 w.	10.00 w.
Youngstown (Sta.-Mun.)	2.50 d.			100.00 m.	75.00 m.
Zanesville (Sta.-Mun.)	10.00 w.			20.00 w.	15.00 w.
Oklahoma:					
Oklahoma City (Sta.)					12.00 w.
Oregon:					
Portland (Fed.)	2.00 d.		8.64–12.00 w.	80.00–125.00 m.	60.00–100.00 m.
Portland (Mun.)			8.64–12.00 w.	80.00–125.00 m.	60.00–100.00 m.
Pennsylvania:					
Erie (Sta.-Fed.)[3]				20.00 w.	12.00 w.
Harrisburg (Sta.)[3]	8.00 w.		10.00–20.00 w.	18.00–25.00 w.	12.00 w.
Johnstown (Sta.-Fed.)[3]	1.50–2.00 d.			75.00 m.	45.00 m.
Philadelphia (Fed.)	1.50–3.00 d.		1.50– 3.00 d.		12.00–18.00 w.
Philadelphia (Sta.)[3]				80.00 m.	16.00 w.
Pittsburgh (Fed.)	2.00 d.			90.00 m.	65.00 m.
Pittsburgh (Fed.-Sta.-Co.)[3]				80.00–100.00 m.	50.00–75.00 m.
Scranton (Fed.-Sta.)[3]	8.00 w.			15.00 w.	10.00 w.
York (Fed.-Sta.)[3]					
Rhode Island:					
Providence (Fed.)					16.00 w.
Providence (Sta.)				15.00–18.00 w.	8.00–12.00 w.
South Carolina:					
Charleston (Fed.)					
Tennessee:					
Memphis (Fed.)				125.00 m.	100.00 m.

[1] And room and board. [3] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
$0.45- .50 h.	$40.00-50.00 m.	$15.00 w.	$7.00-12.00 w.	$0.30- .35 h.	$0.30- .35 h.
5.80 d.	35.00-65.00 m.	14.00 w.	5.00- 8.00 w.	.30 h.	2.10 d.
		12.00 w.	8.00-10.00 w.	2.50 d.	1.50 d.
	8.00 w.	[1] 35.00 m.	1.10 d.	.30 h.	1.00- 1.50 d.
			14.00 w.		
7.00 d.		4.00 d.	3.00 d.	3.00 d.	2.00 d.
	35.00 m.	60.00 m.	8.00 w.		
5.00- 6.00 d.				.30 h.	2.00 d.
		60.00 m.			
				.30-.50 h.	
.55 h.	9.00 w.	15.00 w.	8.00 w.	.35 h.	.25 h.
				.20 h.	
.60 h.	8.00 w.	10.00-14.00 w.	8.00-10.00 w.	.40 h.	2.00 d.
		14.00 w.	1.00 d.	.30 h.	.20 h.
.65 h.	45.00 m.	10.00 w.	6.00 w.	.27 h.	1.60 d.
.80 h.	10.00 w.	10.00-12.00 w.	7.00-8.00 w.	2.50 d.	2.00 d.
.45-.60 h.	8.00-15.00 w.		[2] 8.00-9.00 w.	.35 h.	2.00 d.
				.30 h.	1.60 d.
		15.00 w.	8.00 w.		
				.30h.	
.50 h.	.19 h.	[2] 14.00 w.	[2] 5.00 w.		
.70 h.	35.00 m.	15.00 w.	9.00 w.	.35 h.	1.50 d.
			3.50-5.00 w.	.25 h.	1.00 d.
		10.00 w.	6.00 w.	.25 h.	.20 h.
.75 h.		5.00 w.		.30 h.	1.50 d.
			5.00 w.	.40 h.	
	7.00-10.00 w.	12.00-16.00 w.	6.00-8.00 w.	.30 h.	1.50 d.
.75 h.		7.00 w.	6.00 w.		
			1.00 d.	2.00 d.	1.00 d.
.68¾ h.	10.00 w.	14.00 w.	7.00 w.	.30 h.	.25 h.
				2.00 d.	1.50 d.
.60 h.	10.00 w.	50.00 m.	8.00 w.	.35 h.	.25 h.
.45 h.	24.00-37.00 m.	18.00 w.	6.00 w.	3.00 d.	1.50 d.
		9.00 w.	1.00 d.	.30 h.	.20 h.
5.00-6.00 d.	9.00-15.90 w.	13.00-18.00 w.	10.00-12.00 w.	.35 h.	.30 h.
5.00-6.50 d.	9.00-14.00 w.	[2] 13.00-18.00 w.	[2] 10.00-13.00 w.	.35-.45 h.	.30-.35 h.
.60 h.				.25 h.	.17½ h.
.35-.45 h.	9.00 w.	5.00-7.00 w.	5.00 w.	.25 h.	1.50 d.
		[2] 7.00 w.	[2] 5.00 w.	.30 h.	1.25-1.50 d.
		30.00-60.00 m.	4.00-10.00 w.		1.60-2.40 d.
.70 h.	10.00 w.		6.00 w.	2.00 d.	1.50 d.
.48 h.		15.00 w.	10.00 w.	3.00 d.	2.00 d.
.50-.65 h.	7.50-9.50 w.	12.00-13.00 w.	6.00-10.00 w.		
	7.00 w.	25.00 m.	3.00-6.00 w.	2.50 d.	1.50 d.
.47-.60 h.		[2] 6.00-9.00 w.	[2] 4.00-7.00 w.	.20 h.	.25 h.
		12.50 w.			

[1] January report.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Texas:					
Dallas (Mun.)	$3.50 d.			$5.00 d.	$2.00 d.
Del Rio (Fed.)		$0.45 h.	$7.00 d.	4.00 d.	1.00 d.
El Paso (Fed.)					
Galveston (Fed.)				.62½ h.	
Houston (Fed.)	.53 h.	.75 h.	1.00 h.	.62½ h.	25.00–50.00 m.
Houston (Mun.)				.60½ h.	1.00 d.
Utah:					
Salt Lake City (Fed.)	4.75–6.00 d.	4.50–6.00 d.	6.00 d.	4.50–6.00 d.	1.25–2.00 d.
Virginia:					
Norfolk (Fed.)	4.72 d.			.58 h.	
Washington:					
Bellingham (Fed.-Mun.)				.75 h.	.30 h.
Seattle (Fed.)	5.77½ d.	5.84 d.	6.00 d.	5.60 d.	.25 h.
Seattle (Mun.)	5.00–6.00 d.		4.00–7.00 d.	4.50–6.00 d.	[2] .30 h.
Spokane (Fed.)	5.50 d.	5.00 d.	7.00 d.	5.00 d.	.35 h.
Spokane (Mun.)	4.50 d.		6.00 d.	5.50 d.	.35 h.
Tacoma (Fed.-Mun)	5.00 d.	5.28 d.	6.00 d.	5.00 d.	.35 h.
Walla Walla (Fed.)				3.51 d.	.30 h.
Yakima (Fed.)					
Wisconsin:					
La Crosse (Sta.) [1]					.25 h.
Milwaukee (Sta.-Mun.)	45 h.		.50 h.	.50 h.	25.00 m.
Wyoming:					
Cheyenne (Fed.-Sta.)				.60– .75 h.	

[1] And board. [2] And car fare.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$75.00 m.	$12.00 w.	$15.00 w.	.....	$30.00 m.	.....
25.00 w.	25.00 m.	.....	.....	1.25 d.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	$0.35–.45 h.	15.00–40.00 m.	.....
45.00–275.00 m.	40.00–100.00 m.	2.00–3.00 d.	.25–.50 h.	15.00–35.00 m.	$3.00 d.
90.00 m.	20.00 m.	2.25 d.	.50 h.	30.00 m	.....
40.00–125.00 m.	35.00–75.00 m.	3.00–4.00 d.	.....	40.00–75.00 m.	4.50–5.00 d.
.....	.....	.....	.....	.....	.....
.....	35.00–60.00 m.	3.25 d.	.50 h.	40.00–55.00 m.	.....
60.00 m.	40.00 m.	[1] 45.00 m.	.40 h.	[1] 50.00 m.	.....
60.00–150.00 m.	35.00–75.00 m.	3.50–3.75 d.	.40–.65 h.	45.00–75.00 m.	4.00–4.50 d.
80.00 m.	45.00 m.	80.00 m.	.....	60.00 m.	4.50 d.
90.00 m.	50.00 m.	65.00 m.	.....	60.00 m.	.....
100.00 m.	65.00 m.	4.50 d.	.70–.80 h.	65.00 m.	4.50 d.
40.00 m.	40.00 m.	.....	.....	50.00–65.00 m.	.....
[1] 65.00 m.	[2] 30.00 m.	.37–.44 h.	.....	[1] 45.00–60.00 m.	.....
.....	.....	.....	.....	25.00 m.	.....
100.00 m.	40.00 m.	3.00 d.	.40 h.	35.00 m.	.40 h.
.....	.....	.....	.....	[1] 50.00 m.	.....

[2] And room and board. [1] January report.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operatives, male.	Laundry operatives, female.
Texas:					
Dallas (Mun.)	$6.00 w.		$2.25 d.	$13.00 w.	$12.00 w.
Del Rio (Fed.)	2.00 d.		1.00 d.	.22½ h.	.15 h.
El Paso (Fed.)	4.00 w.				
Galveston (Fed.)					
Houston (Fed.)	3.00–8.00 w.	$6.00 d.	.30 h.	10.00–35.00 w.	7.00–15.00 w.
Houston (Mun.)	20.00 m.		.25 h.		1.00 d.
Utah:					
Salt Lake City (Fed.)	5.00–10.00 w.	5.60 d.	2.90–3.50 d.	16.00–25.00 w.	1.25– 2.50 d.
Virginia:					
Norfolk (Fed.)			.30 h.		
Washington:					
Bellingham (Fed.-Mun.)	4.00–6.00 w.		.35 h.		
Seattle (Fed.)	[1] 30.00 m.		3.50 d.		
Seattle (Mun.)	20.00–50.00 m.	.60 h.–6.00 d.	3.50 d.	15.00–21.00 w.	12.00 w.
Spokane (Fed.)	30.00 m.	6.50 d.	3.50 d.	21.00 w.	13.00 w.
Spokane (Mun.)			3.50 d.		
Tacoma (Fed.-Mun.)	35.00 m.	5.00 d.	4.00 d.	25.00 w.	15.00 w.
Walla Walla (Fed.)	6.00 w.		.35 h.		
Yakima (Fed.)			3.00–3.50 d.		
Wisconsin:					
La Crosse (Sta.)[2]	3.00–5.00 w.		.25 h.		
Milwaukee (Sta.-Mun.)	5.00 w.	.35 h.	.30 h.	12.00 w.	7.00 w.
Wyoming:					
Cheyenne (Fed.-Sta.)			2.50 d.		

[1] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$0.60 h.	.....	$4.80 d.	.....	$6.80 d.	$20.00 w.
.45 h.	.....	4.00 d.	$7.00 d.	7.00 d.	45.00 m.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.55 h.	$0.30–.50 h.	.60 h.	.87½ h.	.87½ h.	6.00–15.00 w.
.....	.....	3.00 d.	.....	.....	.....
5.00–6.00 d.	6.00 d.	5.50–6.00 d.	7.00 d.	6.50 d.	.90–1.75 d.
.59 h.	.59 h.	4.16 d.	.....	4.72 d.	.....
.50 h.	.....	.....	.....	.....	.....
5.84 d.	5.77½ d.	5.50 d.	5.77½ d.	.....	.....
4.50–6.00 d.	6.00 d.	4.50–6.00 d.	.50–.75 h.	6.50 d.	.....
5.00 d.	5.00 d.	5.50 d.	6.00 d.	6.00 d.	12.00 w.
.....	6.00 d.	.....	.....	.....	.....
5.80 d.	.62½ h.	4.50 d.	6.00 d.	6.00 d.	18.00 w
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.45 h.	.45 h.	.37½ h.	.....	.....	6.00 w.
.....	.....	.....	.....	.....	18.00 w.

[a] January report.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Texas:					
Dallas (Mun.)	$2.25 d.				
Del Rio (Fed.)					$85.00 m.
El Paso (Fed.)					
Galveston (Fed.)					
Houston (Fed.)	1.00–3.00 d.		$6.00–27.00 w.	$40.00–150.00 m.	30.00–125.00 m.
Houston (Mun.)	1.25 d.			100.00 m.	70.00 m.
Utah:					
Salt Lake City (Fed.)	1.50–3.00 d.	$20.00–25.00 w.	1.00–2.25 d.	45.00–125.00 m.	40.00–75.00 m.
Virginia:					
Norfolk (Fed.)					
Washington:					
Bellingham (Fed.-Mun.)					
Seattle (Fed.)				100.00 m.	90.00 m.
Seattle (Mun.)	2.00 d.			90.00–110.00 m.	12.00–15.00 w.
Spokane (Fed.)	13.00 w.	21.00 w.	13.00 w.	85.00 m.	60.00 m.
Spokane (Mun.)					
Tacoma (Fed.-Mun.)	3.00 d.	3.00 d.	3.00 d.	125.00 m.	85.00 m.
Walla Walla (Fed.)					
Yakima (Fed.)					
Wisconsin:					
La Crosse (Sta.) [2]					
Milwaukee (Sta.-Mun.)	3.00 w.	15.00 w.	8.00 w.	80.00 m.	50.00 m.
Wyoming:					
Cheyenne (Fed.-Sta.)					85.00 m.

[1] And board. [2] And carfare.

EMPLOYMENT OFFICES IN THE UNITED STATES, FEBRUARY, 1918—Concluded.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female
	$45.00 m.	$15.00 w.	$12.00 w.	$2.25 d.	$2.00 d.
	35.00 m.	2.00 d.	1.50 d.	1.00 d.	1.00 d.
			5.00 w.		
$0.65 h.	20.00–45.00 m.	30.00–50.00 m.	25.00–40.00 m.	2.00–3.00 d.	1.00–2.00 d.
		12.00 w.	7.00 w.	.25 h.	1.00 d.
6.50 d.	24.00–60.00 m.	15.00 w.	30.00–40.00 m.	.30–.40 h.	.25–.30 h.
			[1] 8.00–10.00 w.	.30 h.	.25 h.
5.77½ d.				.40 h.	.30 h.
		[1] 7.00–18.00 w.	9.00–12.00 w.	.35–.50 h.	[2] .30 h.
	13.00 w.	18.00 w.	13.00 w.	.35 h.	.35 h.
				.40 h.	.30 h.
6.00–7.00 d.	15.00 w.	15.00 w.	12.00 w.	4.00 d.	2.25 d.
					.25 h.
			[1] 9.00 w.	.35 h.	.30 h.
			18.00 m.	.30 h.	.20–.25 h.
		14.00 w.	6.00 w.	.30 h.	.25 h.
			[1] 14.00 w.		

[1] January report

ADJUSTMENT OF WAGES AND HOURS OF LABOR IN THE DELAWARE RIVER AND BALTIMORE SHIPYARDS.

Following is given in full the decision as to wages, hours, and other conditions in the Delaware River and Baltimore shipyards, made by the Shipbuilding Labor Adjustment Board February 14, 1918, as corrected and extended March 1, 1918. An explanatory note to the decision states that the corrections and extensions in this revised and authoritative edition have resulted from conferences with representatives of the shipyard owners and of the employees concerned, and are intended to clear up ambiguities and misunderstandings as well as to fix rates for a few occupations not previously covered.

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN DELAWARE RIVER AND BALTIMORE SHIPYARDS.

First. During the month of October, 1917, when the Shipbuilding Labor Adjustment Board was absent on the Pacific coast, disputes arose in different steel shipyards in the Delaware River district. These were temporarily adjusted through the efforts of Mr. Raymond B. Stevens, vice chairman of the United States Shipping Board, with the understanding that any wage scale subsequently determined by the shipbuilding labor adjustment board should be retroactive to the date when the men returned to work, November 2. Although there may be some question as to whether this understanding was intended to apply to yards in which disputes had not yet arisen, we have decided to resolve this in favor of the employees and to make the wage rates fixed retroactive as regards the shipbuilding crafts to which they apply to November 2 for all of the steel shipyards of the Delaware River district actually engaged in the building of ships for the Navy Department or the Emergency Fleet Corporation, that is:

Chester Shipbuilding Co., Chester, Pa.
Harlan Plant, Bethlehem Shipbuilding Co., Wilmington, Del.
New Jersey Shipbuilding Co., Gloucester, N. J.
New York Shipbuilding Co., Camden, N. J.
Pennsylvania Shipbuilding Co., Gloucester, N. J.
Pusey & Jones Co., Wilmington, Del.
Sun Shipbuilding Co., Chester, Pa.
Wm. Cramp & Sons Ship & Engine Building Co., Philadelphia, Pa.

We do this because early in our investigation we became convinced by the unanimous testimony of both sides that a uniform minimum wage scale and uniform piece rates for all of the shipyards on the river, from Bristol to the north to Wilmington to the south, would be desirable and because limiting the retroactive provision to employees who actually struck would amount to penalizing those who, notwithstanding their dissatisfaction with conditions, remained loyally at work, and thus be an incitement to future strikes.

For the yards predominantly in course of construction, that is, of the American International Shipbuilding Corporation, at Hog Island, Pa., of the Merchant Shipbuilding Corporation, at Bristol, Pa., and of the Traylor Shipbuilding Corporation, at Cornwells Heights, Pa., we make the wage rates fixed for crafts engaged in construction work, which appeared before us with definite demands, to wit: Carpenters, plumbers, pipe fitters, electrical workers, sheet-metal workers, painters, blacksmiths,

molders, and engineers, retroactive to the date when we held our hearing on conditions in those yards, that is, January 15, 1918.

For the yards in and near Baltimore, that is, of the Baltimore Dry Dock & Shipbuilding Co., of Baltimore, of the Bethlehem Shipbuilding Corporation, Sparrows Point, Md., of the Maryland Shipbuilding Co., Sollers Point, Md., and of Henry Smith & Sons Co., Baltimore, we make the wage rates fixed retroactive to February 1 in accordance with an agreement with representatives of the employees in those yards.

Second. The most serious obstacle to the maintenance of a uniform minimum wage scale in all of the yards of the district is the variable expense for transportation to and from their work to which the employees of the yards up and down the river from Philadelphia are put owing to inadequate local housing facilities. To equalize this condition we hereby authorize shipyards whose employees are compelled to expend regularly more than 8 cents for transportation to or from their work, to provide such employees with commutation or other tickets, at the expense of the company. In providing free transportation for employees coming from a distance, each shipyard must adopt such precautions to prevent the privilege from being abused as may be prescribed by the auditors of the Navy Department and the Emergency Fleet Corporation. We permit the payment of the entire fares of such employees rather than merely of the excess over 16 cents to enable yards with inadequate local housing facilities to draw their employees from greater distances.

Third. As regards hours of employment, we have found a good deal of diversity and confusion in the different yards growing out of the fact that although the eight-hour day has not yet been universally introduced, the half holiday on Saturday is an institution that is firmly established and tenaciously adhered to. Under the Federal eight-hour law, work in excess of eight hours in any calendar day for any department of the Government counts as overtime. It is in the light of these limitations imposed by Federal law and local custom that we prescribe the following rules to govern hours of employment in the shipyard to which this decision applies:

(1) Eight hours shall constitute a day's work from Monday until Friday, inclusive, and four hours on Saturday.

(2) Work in excess of these periods on any week day shall be calculated as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 60 hours a week for any employee shall not be permitted, excepting in dry docks, or when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day; Washington's Birthday; Decoration Day; Fourth of July; Labor Day; Thanksgiving Day; and Christmas Day.

(5) Men employed on night shift shall receive compensation five per cent (5%) higher than is paid to those employed on day shift.

Our purpose in limiting the work of employees under ordinary circumstances to 60 hours a week is to discourage the practice of excessive overtime, which we believe leads to inefficiency and lessened rather than enlarged production, and to encourage the introduction of the two and three shift systems. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the shipyards of the Delaware River district to take immediate steps looking toward the introduction of additional shifts in their yards.

In addition to the straight day wage and the piece-wage systems we have found in operation in different yards numerous bonus, premium, and contract systems of wage payment. The minimum-wage scale and the piece-rate scales which we prescribe are designed to introduce a greater degree of uniformity in connection with wage payments. We, therefore, direct that no bonus or premium in addition to the rates of

wages prescribed in this award, shall in future be paid, except with the express permission of this board. This is not intended, however, to prohibit shipyards from paying piece rates to employees in other occupations than those covered by the appended piece-rate scales.

Fourth. In certain departments, for example, the departments of riveting and chipping and calking, we have found a preference for the piece-wage system on the part of not only employers but also of the workers themselves. The piece rates appended hereto were the result of conferences between representatives of the yard owners and of the crafts concerned, in which concessions in the interests of harmony and greater production were made by both sides. It is intended that the list shall be from time to time extended to include operations and types of vessels, such as torpedo-boat destroyers and cylindrical oil tankers, for which fair rates have not yet been ascertained. In connection with piecework, testimony was presented to prove the existence of rules or understandings among the workers limiting the amount that any one worker should produce in a day. The origin of these rules or understandings appears to have been the experience of the workers of having the piece rate cut so soon as they showed an ability to increase their earnings beyond what the employer considered a normal wage.

In the present national emergency it is vitally important that every limitation upon output be removed. Every shipyard worker must appreciate that he is fighting for his country when he drives a rivet or calks a seam just as effectively as the soldier in the trenches when he wields his bayonet or fires a gun. And as the soldier is paid directly by the Government, so the shipyard worker must realize that he now receives his compensation from the Government, all shipbuilding now being upon Government account. To bring it home to pieceworkers that the Government is behind them and that they must be behind the Government, we direct that the following notices be printed and posted conspicuously in every department of every shipyard where piecework is carried on:

The piece rates prescribed as part of its award by the Shipbuilding Labor Adjustment Board, and printed in the piece-rate book for Delaware River and Baltimore shipyards, shall under no circumstances be lowered during the duration of the War. In the name of the people of the United States we urge employees in shipyards to do their utmost toward winning the War by removing all limitations upon output and hastening in every possible way, each according to his capacity, the production of ships.

SHIPBUILDING LABOR ADJUSTMENT BOARD.

Fifth. The methods for determining the amount of back pay to which employees in the different yards shall be entitled shall be as follows:

1. In the case of employees on the straight day wage system the new hourly wage fixed by the board is to be multiplied by the total number of hours which each employee worked from November 2 until the date when the new wage scale is put into effect. From the product thus determined the total wage, including premiums and bonuses of every kind, which the employee received for his work, is to be deducted. The balance constitutes the back pay to which he is entitled. In determining the total number of hours of employment hours counted and paid for at time and one-half, or double time when the original payment was made, are to be counted as time and one-half or double time in calculating earnings at the new rate of wages, but all other hours are to be calculated as straight time.

2. In the case of pieceworkers, a representative of the board is to determine in cooperation with representatives of the pieceworkers of each craft and of each yard by a study of the actual cards of a dozen pieceworkers of each different craft in each yard, selected so as to cover the different kinds of piecework performed upon a vessel, the average increase in the earnings of such pieceworkers resulting from calculating their earnings at the new piece rates prescribed and comparing them with the earnings they actually received. The average percentage of increase so determined for each piece-

work occupation, multiplied by the total earnings of each pieceworker of each respective occupation from November 2 until the date when the new rates become effective, shall determine the back pay which such pieceworker is entitled to receive.

Sixth. The back pay due to both day workers and pieceworkers shall be paid at the earliest date at which the elaborate calculations necessary to their determination can be completed, after the rates fixed by this decision are put into operation.

Seventh. The minimum rate of wages to be paid to different classes of employees by all of the shipyards of the Delaware River and Baltimore districts shall be those set forth in the schedule appended hereto (Exhibit A), which is made a substantive part of this award.

Eighth. For all "dirty work" in connection with the repair of vessels performed in or upon the vessel employees of the different drafts shall receive 10 cents an hour more than the minimum hourly rates prescribed in schedule "A" of this decision.

Employees engaged on repair work in or upon vessels shall receive double time for all overtime over eight hours from Monday until Friday and over four hours on Saturdays, as well as on Sundays and the holidays specified in section third.

Ninth. Rates of wages now being paid to individual employees in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Tenth. The piece rates to be paid for riveting to riveting gangs are those set forth in the schedule appended hereto (Exhibit B). The division of the riveting gang's pay in accordance with these rates is to be in the following proportions: To the riveter, forty-four per cent (44%); to the holder-on, thirty-three per cent (33%); and to the heater, twenty-three per cent (23%).

Eleventh. The piece rates to be paid for chipping and calking and drilling and reaming are those set forth in the schedules appended hereto (Exhibits C, D, and E).

Twelfth. The piece rates to be paid to linermen in the William Cramp & Sons Ship & Engine Building Co., and in other shipyards employing linermen at piecework, are those set forth in the accompanying schedule (Exhibit F).

Thirteenth. No reduction in any of these piece rates is to be permitted on the part of any shipyard in the Delaware River district during the duration of the War.

Fourteenth. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Fifteenth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyards and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates tentatively fixed and report a recommendation for their confirmation or modification by this board. The board shall on the basis of such report and recommendation determine a uniform minimum rate for each such occupation and add it to the rates prescribed in this award.

Sixteenth. The rates and other conditions prescribed in this decision, except as otherwise provided, shall be put into effect on or before Monday, February 25, 1918.

(Signed) V. EVERIT MACY, *Chairman.*
(Signed) LOUIS A. COOLIDGE.
(Signed) A. J. BERRES

WASHINGTON, D. C., *March 1, 1918.*

EXHIBIT A.

Minimum-wage scale for journeymen, specialists, helpers, and laborers in specified crafts in Delaware River and Baltimore shipyards.

	Rate per hour.
Acetylene department:	
Burners, first class	$0.65
Burners, second class	.60
Grinders	.50
Chippers	.50
Welders	.65
Helpers	.46
Anglesmith department:	
Anglesmiths, heavy fires	.87½
Anglesmiths, heavy fires, helpers	.55
Anglesmiths, other fires	.72½
Anglesmiths, other fires, helpers	.46
Furnace men on shapes and plates (ship work)	.82½
Electric welder	.65
Blacksmith shop:	
Hammer and machine forgers, heavy	1.35
Heater	.55
Lever men or cranemen	.70
Helpers	.50
Hammer runner, heavy	.55
Blacksmiths, heavy fires	.87½
Blacksmiths, heavy fires, helpers	.55
Blacksmiths, other fires	.72½
Blacksmiths, other fires, helpers	.46
Drop forgers	.70
Drop forgers' helpers	.50
Bolt makers	.72½
Bolt makers' helpers	.46
Laborers	.40
Liner forgers	.55
Liner forgers' helpers	.46
Boiler shop:	
Boiler makers	.70
Drillers	.60
Holders-on	.50
Rivet heaters	.40
Flange turners	.75
Helpers	.46
Slab furnace men	.75
Planer hands	.55
Bolting and liner department:	
Bolters	$0.50
Liner men	.54
Helpers	.42½
Cement department:	
Cementers	.50
Helpers	.42½
Chipping and calking department:	
Tank testers	.70
Hand chippers and calkers	.70
Pneumatic chippers and calkers	.65
Packers	.50
Cleaning department:	
Leader	.55
Laborers	.40
Coppersmith department:	
Coppersmiths	.70
Helpers	.46
Drilling and reaming department:	
Drillers	.60
Reamers	.50
Electrical department:	
Electricians, first class	.70
Electricians, second class	.65
Wiremen	.55
Joiners	.70
Machinists, first class	.72½
Helpers	.46
Erecting department:	
Leading men	.85
Marine erectors, first class[1]	.72½
Marine erectors, second class	.62½
Specialist or handy man	.52
Helpers	.46
Fitting-up department:	
Fitters, first class	.72½
Fitters, second class	.65
Regulators, first class	.60
Regulators, second class	.52½
Helpers	.46
Foundry department:	
Molders and core makers	.72½
Cupola tenders	.72½
Helpers	.46

[1] Understood to include machinists, plumbers, and pipe fitters.

	Rate per hour.
Foundry department—Concld.	
Hand and machine chippers	$0.50
Laborers	.40
Furnace department:	
Leaders	.67½
Firemen and helpers	.55
Strikers	.55
Hull engineering department:	
Marine erectors, first class[1]	.72½
Marine erectors, second class	.62½
Specialists or handy men	.52
Joiners	.70
Helpers	.46
Joiner department:	
Joiners	.70
Machine men	.70
Helpers	.42½
Lumber department:	
Machine men	.65
Helpers	.42½
Machine shop:	
Machinists, first class	.72½
Machinists, second class	.62½
Specialists or handy men	.52
Helpers	.46
Material labor department:	
Engineers, locomotive	.65
Operators, locomotive, cantilever, gantry, and other cranes of over 3 tons	.70
Operators, stiff-legged derricks	.68
Hoisting and portable firemen	.50
Locomotive conductors	.50
Road crane conductors	.50
Mold loft:	
Gang leaders	.85
Loftsmen, first class	.82½
Loftsmen, second class	.72½
Joiners	.70
Helpers	.42½
Paint department:	
Painters and polishers	.60
Helpers	.42½

	Rate per hour.
Pattern shop:	
Pattern makers	$0.75
Laborers	.40
Rigging department:	
Marine leaders	.75
Marine riggers	.62½
Crane leaders	.75
Crane-gang leaders	.67½
Cranemen	.60
Erector leaders	.60
Erectors	.50
Riveting department:	
Rivet testers	.70
Stage builders	.57½
Hand riveters	.70
Pneumatic riveters	.65
Holders-on	.50
Heater boys	.38
Passer boys	.30
Helpers	.46
Ship carpenter's department:	
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Fasteners	.60
Erectors	.50
Helpers	.42½
Wood calkers	.70
Wood reamers	.55
Ship shed department:	
Punchers	.55
Planer and scarfer	.55
Countersinkers	.55
Drillers	.60
Bending rollers	.62½
Mangle rollers	.57½
Pressmen, first class	.62½
Pressmen, second class	.55
Offsetters	.55
Sawyers	.47½
Helpers	.46
Ventilation department:	
Layers-out	.70
Sheet-metal workers	.70
Helpers	.46

Rates for employees engaged in construction work.

	Rate per hour.
Operators, locomotive cranes	$0.82½
Blacksmiths	.72½
Molders	.72½
Plumbers	.72½
Pipe fitters	.72½
Sheet-metal workers	.70

	Rate per hour.
Carpenters	$0.70
Electricians, first class	.70
Electricians, second class	.65
Wiremen	.55
Engineers	.65
Painters	.60
Common laborers	.35

NOTE.—For Exhibits "B" to "G" see printed piece-rate book.

RECENT WAGE STUDIES AND THE DEMANDS OF THE LOCOMOTIVE FIREMEN.

The Brotherhood of Locomotive Firemen and Enginemen have recently submitted demands for increased wages to the Director General of Railroads. These demands were substantially as follows: (1) Ten per cent increase in wages; (2) a minimum wage of $3.50 a day; and (3) time and one-half for overtime for all employees except thoses engaged in passenger service. Hearings have just been held by a Federal wage commission appointed to consider the question of wage increases of railroad employees.

The brief submitted by the brotherhood [1] contains valuable wage and cost-of-living data. It also discusses the effect of the recent Federal eight-hour law upon wages and hours, and reviews the occupation of locomotive firemen from the viewpoint of wages, hours, hazard, skill, and other conditions of employment. The data presented in the brief tends to show (1) that the wage level of firemen and hostlers in the railroad service is very much lower than that in a large number of other occupations representing many lines of industry; and (2) that they have not been able at their prevailing rates of pay, in face of the unprecedented advances in living costs, to maintain their former standards of living. The wage statistics, other than those for firemen, upon which the argument for increased wages is based, are taken from a recent report on "Wages and the War," compiled by Hugh S. Hanna and W. Jett Lauck.[2]

The following table shows the money compensation for eight hours' work in various occupations and industries for the years 1911–12, 1914, and 1917.

In order that comparison might readily be made between the earnings of firemen and those of other occupations, all entries have been put on the basis of the amount earned in eight hours of work. Most of the occupations shown are on an actual eight

[1] Argument and brief submitted on behalf of locomotive firemen and hostlers, by W. S. Carter, president, Brotherhood of Locomotive Firemen and Enginemen. Cleveland, The Doyle & Waltz Printing Co., February, 1918. 285 pp.

[2] Wages and the War: A summary of recent wage movements. By Hugh S. Hanna and W. Jett Lauck. Cleveland, The Doyle & Waltz Printing Co., 1918.

hour basis, but in a few instances, as in the iron and steel industry, the actual hours may be much longer.

Examination of the table shows that, with extremely few exceptions, the wage level of the large number of occupations given, representing many lines of industry is very much higher than that of firemen and hostlers in railroad service. Unless the rates of pay of firemen and hostlers are raised to the level prevailing in other lines of industry for the same work, the firemen, in order to maintain a minimum standard of existence, will necessarily have to seek employment in other industries. Such a result would be highly unfortunate, as it would further cripple the railroads, which are already operating under many difficulties.

COMPARATIVE STATEMENT OF EARNINGS FOR EIGHT HOURS OF LABOR IN VARIOUS OCCUPATIONS AND INDUSTRIES, BY SPECIFIED YEARS.

Occupation.	1911–1912	1914	1917	Per cent increase December, 1917, over—	
				1911	1914
Pattern makers (shipyards, San Francisco)	$5.00	$5.00	$7.15	43	43
Sheet-metal workers (shipyards, San Francisco)	4.00	4.00	6.60	65	65
Bricklayers (average of 39 cities)	5.17	5.46	[1] 5.83	13	7
Plasterers (building trades, average, 35 cities)	5.14	5.42	[2] 5.79	13	7
Machinists (shipyards, San Francisco)	4.00	4.00	5.77	44	44
Blacksmiths (shipyards, San Francisco)	4.00	4.00	5.77	44	44
Riveters and calkers (shipyards, San Francisco)	3.60	3.60	5.77	60	60
Structural-iron workers (building trades, average, 32 cities)	4.58	4.97	5.62	23	13
Plumbers and gasfitters (building trades, average, 37 cities)	4.50	4.96	5.59	24	13
Steam fitters (building trades, average, 33 cities)	4.66	4.86	5.56	19	14
Cement workers, finishers (building trades, average, 18 cities)	4.72	4.74	[2] 5.33	13	12
First blacksmith, bituminous coal (Hocking Valley district)	2.96	3.12	5.27	78	69
Stonemasons (building trades, Massachusetts)	4.56	4.74	[3] 5.21	14	10
Loftsmen (shipyards, Delaware River)	.....	3.12	5.16	.....	65
Inside wiremen (building trades, average, 35 cities)	3.90	4.22	5.07	30	20
Tracklayers, cagers, drivers, trip-riders, water haulers, machine haulers, timbermen, wiremen and motormen, bituminous coal (Hocking Valley district)	2.70	2.84	5.00	85	76
Lathers (building trades, Massachusetts)	3.94	4.20	[4] 4.95	26	18
Pipemen, bituminous coal (Hocking Valley district)	2.63	2.78	4.92	87	77
Sheet-metal workers (building trades average, 31 cities)	3.74	4.14	4.81	29	16
Shipfitters (navy yard, Philadelphia)	3.44	3.52	4.80	40	36
Tracklayers' helpers, dumpers and trimmers, bituminous coal (Hocking Valley district)	2.49	2.62	4.75	91	81
Carpenters (building trades, average, 38 cities)	3.83	4.06	[4] 4.72	23	16
Shipsmiths (navy yard, Philadelphia)	3.52	3.52	4.72	34	34
Coppersmiths (navy yard, Philadelphia)	3.54	3.68	4.72	33	28
Machinists (navy yard, Philadelphia)	3.60	3.76	4.72	31	26
Pattern makers (navy yard, Philadelphia)	3.76	3.76	4.72	26	26
Pipe fitters (navy yard, Philadelphia)	3.28	3.44	4.72	44	37
Linotype operators, day, newspapers (average of 27 cities)	4.18	4.39	4.66	11	6
Compositors, day, newspapers (average of 38 cities)	4.12	4.33	4.59	11	6
Machinists (shipyards, Delaware River)	.....	2.64	4.40	.....	67
Electrotypers, finishers (average, 25 cities)	3.49	3.69	4.09	17	11
Boiler makers (southeastern railroad shops)	3.01	3.29	4.09	36	24
Blacksmiths (southeastern railroad shops)	3.12	3.28	4.04	29	23
Machinists (southeastern railroad shops)	2.99	3.14	4.04	35	29
Longshoremen, daywork (New York City)	2.64	.....	4.00	52	.....
Granite cutters (building trades, Massachusetts)	3.23	3.37	[4] 4.00	24	19
Sheet-metal workers (shipyards, Delaware River)	.....	2.40	4.00	.....	67
Electricians (shipyards, Delaware River)	.....	2.40	3.96	.....	65
House painters (building trades, Massachusetts)	3.22	3.41	[4] 3.94	22	16
Decorators (building trades, Massachusetts)	3.24	3.45	[3] 3.92	21	14
Paper hangers (building trades, Massachusetts)	3.13	3.38	[3] 3.91	25	16
Firemen (Chicago, Burlington & Quincy Railroad, freight service, O-1—170,000 pounds and less than 200,000 pounds on drivers)	3.75	3.75	3.75	.....	.....
Firemen (Chicago, Burlington & Quincy Railroad, freight service, O-2—200,000 and less than 250,000 pounds on drivers)	.....	3.75	3.75	.....	.....
Core makers (metal trades, Massachusetts)	2.75	2.76	[4] 3.66	33	33
Greasers and couplers, bituminous coal (Hocking Valley district)	1.48	1.56	3.64	146	133

[1] May, 1917.
[2] October, 1917.
[3] July 1, 1917.
[4] August, 1917.

COMPARATIVE STATEMENT OF EARNINGS FOR EIGHT HOURS OF LABOR IN VARIOUS OCCUPATIONS AND INDUSTRIES, BY SPECIFIED YEARS—Concluded.

Occupation.	1911–1912	1914	1917	Per cent increase December, 1917, over—	
				1911	1914
Firemen (Chicago, Burlington & Quincy Railroad, freight service, D-3—140,000 pounds and less than 170,000 pounds on drivers)	$3.60	$3.60	$3.60	.....	.....
Blacksmiths (shipyards, Delaware River)	.....	1.76	3.60	.....	105
Labor (shipyard, San Francisco)	2.40	2.40	3.57	49	49
Hod carriers (plaster tending, average, 30 cities)	3.03	3.16	3.55	17	12
Buffers (metal trades, Massachusetts)	2.73	2.54	[1] 3.44	26	35
Hod carriers (mason tending, average, 30 cities)	2.73	2.96	3.30	21	11
Firemen (Chicago, Burlington & Quincy Railroad, passenger service, O-1 Class—170,000 pounds and less than 200,000 pounds on drivers)	3.20	3.20	3.20	.....	.....
Firemen (Chicago, Burlington & Quincy Railroad, passenger service, D-3 Class—140,000 pounds and less than 170,000 pounds on drivers)	3.05	3.05	3.05	.....	.....
Bakers, second hands (Massachusetts)	2.31	2.54	[1] 2.93	27	15
Firemen (Chicago, Burlington & Quincy Railroad, passenger service, H-3 Class—100,000 pounds and less than 140,000 pounds on drivers)	2.85	2.85	2.85	.....	.....
Hostlers (Northern Pacific Railway)	[2] 3.35	[2] 3.35	2.79	[3] 17	[3] 17
Firemen (Chicago, Burlington & Quincy Railroad, switching service):					
Engines less than 140,000 pounds on drivers	[4] 2.50	2.70	2.70	8	.....
Engines 140,000 pounds on drivers and over	.....	2.75	2.75	10	.....
Trapper boys, bituminous coal (Hocking Valley district)	1.25	1.32	2.65	112	101
Motormen and conductors (street railways, average, 120 cities)	2.18	2.24	2.58	18	15
Hostlers (Boston & Albany)	2.15	2.40	[5] 2.40	12	.....
Common labor (iron and steel)	1.28	1.44	2.32	80	60

[1] July 1, 1917.
[2] $3.35 for 12 hours or less.
[3] Decrease.
[4] All classes of locomotives. "Wages of locomotive firemen in switching service on the Chicago, Burlington & Quincy Railroad for 1911 were fixed as follows: 'First class yards, 25 cents per hour; all other yards, 24 cents per hour.' The day's work was fixed at 10 hours."
[5] At main line terminals hostlers received $2.50.

The part of the brief dealing with prices and cost of living is based primarily upon a recent report on Cost of Living and the War, issued by W. Jett Lauck.[1] In this volume the results of the more important investigations on cost of living, including budgetary and retail price studies, have been brought together. In commenting upon the increased cost of living the brief states that "locomotive firemen and hostlers in common with other wage earners have not been able at their prevailing rates of pay, in face of the unprecedented advances in living costs, to maintain their former standards of living. They have found a constantly increasing amount of their income absorbed by the primary demands of food, fuel, and rent, and have had a decreasing proportion available for clothing and sundries or the comforts of life." The annual wages of locomotive firemen are compared with certain standard workingmen's budgets in an attempt to show that such wages are inadequate to meet the minimum requirements of subsistence and comfort.

[1] Cost of Living and the War. By W. Jett Lauck. Cleveland, The Doyle & Waltz Printing Co., 1918.

For the purpose of bringing out the real significance of the results of recent studies and investigations as to the increased cost of living and the minimum income or budgetary requirements of the normal family of the wage earner, the totals called for by the different studies of family budgets which have been made in recent years are submitted in comparative form below. Where the budgetary inquiry or statement has not been made in complete form, as in the case of the Washington, Canadian, or the public health department of New York City statements, the total has been estimated from the items of food, or food, rent and fuel given. This can be done with an approximate degree of accuracy for the reason that the ratios of different items to the total budgets of families of certain incomes has been well established by past investigations. The statement of the result of recent studies as to the minimum annual budgetary requirements of the wage earner follows:

	Food.	Total.
Canadian Department of Labor	$607.00	$1,518.00
State of Washington, department of labor (Seattle)	515.00	1,287.00
Department of health, New York City, N. Y	673.00	1,682.00
Average of 24 principal American cities	660.00	1,650.00
Minimum health diet (Prof. M. E. Jaffa)	544.00	1,360.00
Bureau of municipal research, Philadelphia	590.00	1,200.00
Philadelphia shipyard workers	640.00	1,431.00
Seattle street railway arbitration board	533.00	1,506.00
Dr. Jessica B. Peixotto, University of California	540.00	1,476.00
Unskilled laborer, New York City, February, 1917 [1]	492.00	980.00

[1] Because of advances in prices, this budget has advanced in cost to approximately $1,200 at the present time (Feb., 1918).

From these exhibits, as well as from other facts relating to budgetary studies, it is apparent that a budget of family expenditures at the present time to cover the minimum of subsistence requires an annual wage of at least $1,200, while a budget of expenditures to provide for a minimum standard of comfort calls for a wage which will yield annual earnings of approximately $1,500. The wage arbitration board in the street railway dispute in Seattle fixed this minimum in December, 1917, at $1,505.60 for motormen and conductors in Seattle and Tacoma. The cost of living is not unusually high in these cities and, as a matter of fact, is lower than in many other localities in the country. This is not a local minimum of subsistence and comfort, therefore, but one which should have a general application.

Locomotive firemen and hostlers are requesting a minimum rate of pay of $3.50 a day. Assuming it were physically possible for a fireman to work every day in the year, including all Sundays and holidays, even under these impossible conditions his annual earnings would be only $1,277.50 at the rate requested, which is more than $200 below the minimum of comfort prescribed by recent budgets and approximately only the amount called for by the minimum standard of subsistence. As a matter of fact, because of the arduousness of his work, a locomotive fireman under present conditions does unusually well if he averages 300 days a year. Under actual railroad operating practice, therefore, his annual earnings at the rate requested of $3.50 a day might range between a maximum of $1,100 to $1,200 per annum, which is considerably below the income indicated by recent inquiries as the bare minimum of subsistence of an average workingman's family. When it is considered further that a locomotive fireman, unlike other wage earners, must spend a considerable part of his earnings for meals and lodgings away from home, it is apparent that the request for a $3.50 minimum is reasonable to say the least, if not inadequate. It is inadequate for the maintenance of a minimum standard of family comfort, and on this basis, should be at least $4 a day.

The following table shows the cost of specified items of expenditure in the workingmen's budget in 1900, and the estimated cost of simi-

lar budgets in 1911, 1914, and 1917. The budget of 1900 is based upon the average expenditure of 2,567 families as ascertained by the United States Bureau of Labor Statistics and published in its report on cost of living (18th Annual Report, 1903). The figures for 1911, 1914, and 1917 are obtained by applying to the principal items of the 1900 budget the percentages of increase in those years as compared with 1900. According to these estimates the total expenditure per family increased 43 per cent from 1914 to 1917.

ESTIMATED WORKINGMEN'S BUDGETS IN 1911, 1914, AND 1917, AS COMPARED WITH 1900.

Items of expenditure.	Average expenditure of 2,567 workingmen's families in 1900.	Estimated average expenditures of a workingman's family in—		
		1911	1914	1917
Food	$327.00	$430.00	$477.00	$716.00
Rent	100.00	133.00	132.00	159.00
Mortgages	12.00	12.00	12.00	12.00
Fuel and lighting	40.00	40.00	46.00	82.00
Clothing	108.00	120.00	121.00	210.00
Taxes	6.00	6.00	6.00	6.00
Insurance	21.00	21.00	21.00	21.00
Organizations	9.00	9.00	9.00	9.00
Religious purposes	8.00	8.00	8.00	8.00
Charity	3.00	3.00	3.00	3.00
Furniture and utensils	26.00	26.00	30.00	39.00
Books, newspapers	8.00	8.00	8.00	9.00
Amusements, vacation	12.00	12.00	12.00	13.00
Liquors	12.00	12.00	12.00	14.00
Tobacco	11.00	11.00	11.00	12.00
Sickness, death	21.00	21.00	21.00	21.00
Other purposes	45.00	51.00	50.00	67.00
Total	769.00	923.00	979.00	1,401.00

REGULATION OF WAR WAGES BY COST OF LIVING IN GREAT BRITAIN.

The following statement of a new basis for regulating war wages which has been agreed upon by employers and workers in certain sections of the British textile industry, is taken from the Textile Mercury:[1]

The agreement regulating war wages which was recently drawn up and agreed to by the employers and operatives in the bleaching, dyeing, calico printing, and finishing trades has one or two remarkable features in it. It cancels all previous war grants and bonuses, and war wages are now being regulated in accordance with the increased cost of living, perhaps the only instance on record in which advances or decreases are to be made over and above the wages ratal basis, according to the rise and fall of the cost of living as estimated by the Board of Trade and published in the Labor Gazette. The index figure of food and other prices will be compared with that of July 1, 1914. The scale of war wages will operate only to the index figure of 95 per cent, in increased cost of living; when that percentage is exceeded the parties will be brought together to reconsider matters. When the scheme came into operation the other week, the cost of living was estimated at 75 per cent above the index figure of July 1, 1914, which meant an increase of 18s. 6d. ($4.50) per week to men of 18 years of age and over; 11s. 6.75d. ($2.81) to women of 18 years of age and over; to males and

[1] Textile Mercury, Manchester, England, Dec. 29, 1917, pp. 383, 384.

females from 16 to 18 years of age, 9s. 3d. ($2.25) a week; males and females under 16 years of age, 8s. 1.125d. ($1.97) per week. A list of increases from 1 to 95 per cent (according to increase of cost of living from 1 to 95 per cent above July, 1914) has been printed, so that each operative can see at once the effect which changes in cost of living will have on the unique scale of war wages. The new arrangement affects from 50,000 to 60,000 workers in the industries named in Lancashire, Cheshire, and Derbyshire. * * * It embraces practically all classes of workers in the industry except mechanics and others engaged in maintenance and repairs of plant and machine printers whose war earnings are fixed under agreement with the respective unions for the various sections of labor.

This is the first attempt on a large scale to adopt a scientific method of regulating earnings according to the cost of living, though it is true that steel smelters and some sections of the coal trade have their wages regulated by the selling price of the output. Every three months a joint committee will meet and on the basis of last published figure of the Board of Trade will alter the rate of war grant in proportion to the rise or fall. The agreement will remain in force for a period of 12 months (or until the declaration of peace, if that event takes place earlier), and is terminable by three months' notice from either side.

WAR BONUS FOR GOVERNMENT EMPLOYEES IN AUSTRIA.[1]

By an order of the Austrian minister of finance dated December 8, 1917, the payment for the first six months of 1918 of such taxes as in normal circumstances would be deducted from the salaries of Government employees is being taken over by the State. An increase of salary in form of a war bonus is granted for the same period. The increase varies with the amount of the salary and the size of the family of the employee. The recipients of the war bonus are divided into five classes: (1) Bachelors and widowers without children; (2) married men without children and widowers with one child: (3) married men with one or two children, and widowers with two or three children; (4) married men with three or four children, and widowers with four or five children; (5) married men with more than four children, and widowers with more than five children. The following table gives the highest and lowest bonuses of statutory Government employees in the five classes enumerated above:

Annual salary.	War bonus.				
	Class 1.	Class 2.	Class 3.	Class 4.	Class 5.
14,000 to 18,000 crowns ($2,842 to $3,654)....	$143.72	$326.42	$394.63	$462.84	$531.05
1,000 to 2,200 crowns ($324.80 to $446.60)....	98.66	146.16	199.75	253.34	306.94

There are also provided bonuses for the State police force, copyists and other nonstatutory employees. Another order of the same date provides similar bonuses for retired State officials, widows and orphans of State officials, and other persons in receipt of pensions.

[1] Data taken from Wiener Zeitung, Vienna, Dec. 12, 1917.

In an article on economic conditions in Austria-Hungary during 1917 as compared with those in 1913 the Neue Freie Presse of January 1, 1918, states that the increase in the salaries of Government officials amounts to 761,000,000 crowns ($154,483,000) per annum.

WAR BONUSES IN FRANCE.

TRAMWAYS AND INTERURBAN RAILWAYS.

The Journal Officiel de la République Française publishes in full the decrees issued by the Minister of Public Works and Transports, which authorize the management of tramways and interurban railways to increase the tariff for transportation of passengers or merchandise and accessory charges for handling and storage. These increased rates have been allowed in most, if not all, cases because of increases granted wage earners, or supplementary allowances due to the high cost of living.

The lines affected are generally recognized as public utilities, and therefore under Government supervision.

In requesting an authorization for increase in tariff rates the following method of procedure is general. The concessionaire submits to the prefect of the municipality a statement showing the necessity, and also the amount of supplementary allowances to be paid employees as an "indemnity for the high cost of living." This statement is accompanied with a request for authority to increase transportation charges. After an agreement has been reached and signed by the railroad management and the prefect the proposition is submitted to the President of the Republic, who, if he approves, signs the proposal, and the Minister of Public Works issues a decree making the agreement effective, and ordering it to be entered in the Bulletin of Laws.

The decree may be retroactive in so far as it relates to supplementary wages, which in some cases are made payable from a date several months before the proposal was even submitted to the prefect for consideration. As an example of this the agreement between the prefect of the Somme and the director of the Economic Society of Railways was signed on September 15, 1917, and approved by the President on October 30, 1917, but the supplementation of wages dated from November 1, 1916.[1]

The decrees in general cover the period of the War and one year subsequent to cessation of hostilities. It is stipulated in many agreements that a separate account must be kept both of additional receipts and of expenses resulting from these increases and that such receipts are exempt from any concession tax only in so far as the

[1] Journal Officiel, Jan. 2 and 3, 1918.

receipts exceed the expense. In some cases it is specified that excess net receipts shall be used in road betterment.[1] In other cases the agreement states that deficits due to the new rates may be charged to that portion of operation receipts due the municipality as a concession tax.[1]

Of the various plans adopted in granting these temporary supplemental wages the following examples have been selected as showing the most frequent base upon which they are calculated, their amount, and the classes of employees benefited by them.

The General Association of Railways of the Somme adopted a dual system as a basis of such compensation.[1] The classes to which supplementary wages are paid are: (*a*) Male employees and females, heads of families, earning not more than 3,600 francs ($694.80); (*b*) salaried persons and laborers, legally charged with the maintenance of one or more children under 16 years of age, and earning not more than 6,000 francs ($1,158) per year.

For the first class (*a*) an allowance of 15 per cent is made on that portion of the earnings less than 1,200 francs ($231.60); 10 per cent on that portion between 1,200 francs and 1,800 francs ($347.40), it being understood that the minimum to be considered as a base for this allowance is 1,200 francs per year for men and 600 francs ($115.80) for women, heads of families.

For the second class (*b*) an annual allowance is made of 50 francs ($9.65) for the first child; 100 francs ($19.30) each for the second and third child, and 200 francs ($38.60) for each child under 16 years of age in addition to the third.

The second class of allowance, for family charge, is supplemental to the first class, of temporary increases in wages.

In each class those receiving the maximum basic wages or more (3,600 francs ($694.80) in the first class and 6,000 francs ($1,158) in the second) are granted an allowance which, when added to their annual earnings, will make them equal to the amounts received by the highest paid in each class, respectively, family charges being equal. Allowances are paid monthly and are not subject to reduction for retirement funds. An increase of 50 per cent on accessory charges is permitted to cover the anticipated increase in operating expenses.

In Saône-et-Loire a system of railroads had granted certain increases of wages dating from January 1, 1917,[2] but further increases became operative in response to a petition dated June 19, 1917, by which married, widowed, or divorced employees having children with whose maintenance they are legally charged receive a flat increase of 360 francs ($69.48) per year, and unmarried employees,

[1] Journal Officiel, Nov. 7, 1917, p. 8901. [2] Journal Officiel, Nov. 7, 1917, p. 8902.

and married, widowed, or divorced employees not having the maintenance of children are granted 240 francs ($46.32). To meet these extra charges an increase of 50 per cent on accessory transportation charges is permitted.

The agreement made by the Southern Railway of France and the Department of Var,[1] including subsidiary lines, presents some novel features. The rate of increase is that generally accorded—15 per cent on that portion of earnings not exceeding 1,200 francs ($231.60); 10 per cent on that portion between 1,200 francs and 1,800 francs ($347.40) for all employees not receiving more than 3,600 francs ($694.80); and an allowance to all heads of families of 50 francs ($9.65) for one child, 100 francs ($19.30) each for the second and third child, and 200 francs ($38.60) for each child under 16 years of age, in addition to the third, provided the salary does not exceed 6,000 francs ($1,158) per year.

The minimum annual increase for men is fixed at 180 francs ($34.74) and for women at 90 francs ($17.37).

Increased tariff is permitted, but the Department of Var agrees to reimburse the company for any deficit due to these supplementary wages, and any excess of profits due to the operation of this decree is payable into the Department's treasury.

The scale of wages adopted on December 30, 1912, between the city of Nantes, the Nantes Tramway Co., and its employees, was modified on October 7, 1917, as follows:[2]

Wages of motormen and motor women for the six months following the apprenticeship period (15 days), 4.25 francs (82 cents) per day; for the next six months 4.5 francs (86.9 cents) per day; after which if their work is satisfactory they are permanently employed under the following monthly scale: For the first two years, 123 francs ($23.74) per month; for the third year, 128 francs ($24.70); for the fourth year, 133 francs ($25.67), and thereafter an increase of 5 francs (96.5 cents) per month for each biennial period of service up to and including the twelfth year. The maximum wages of 158 francs ($30.49) are paid beginning with the thirteenth year of permanent service.

Ticket collectors, males or females, shall not be required to serve an apprenticeship exceeding 10 days. For the following six months they will be paid 4 francs (77.2 cents) per day of actual work. Monthly wages for the first and second years thereafter will be 118 francs ($22.77), increased by 5 francs (96.5 cents) per month for each biennial period of service up to and including the fourteenth year of service. The maximum of 148 francs ($28.56) is reached beginning with the fifteenth year.

[1] Journal Officiel, Dec. 18, 1917, p. 10366.

[2] Journal Officiel, Nov. 12, 1917, p. 9040.

Head motormen are divided into five classes. Their monthly wages vary from 153 to 193 francs ($29.53 to $37.25), each grade receiving 10 francs ($1.93) more than the next lower grade. No person shall be kept more than 5 years in either of the two lower grades.

Manual laborers in depots and shops receive a minimum wage of 40 centimes (7.7 cents) per hour, after 3 years of service 42.5 centimes (8.2 cents), and after 6 years 45 centimes (8.7 cents).

Warehouse inspectors (*ouvriers-visiteurs*) are paid an hourly wage of 45 centimes at the beginning of service, and reach 50 centimes (9.7 cents) after 6 years of service.

Fitters, locksmiths, turners, molders, carpenters, painters, electricians, etc., receive from 55 centimes (10.6 cents) per hour, for new employees, to 65 centimes (12.5 cents) by regular increases through five grades.

Helpers are paid from 45 to 50 centimes (8.7 to 9.7 cents) per hour. Their number is limited to 12 per cent of the shop force.

Wages of persons engaged in maintenance of way vary from 40 to 50 centimes (7.7 to 9.7 cents) per hour, the maximum being reached after 12 years of service. Pavers receive 55 centimes (10.6 cents) per hour.

In addition, each salaried person or wage earner who has been in the service of the company two months or more is granted an allowance, because of the increased cost of living, of 1 franc (19.3 cents) per day of actual service for the period of the War and one year thereafter.

While no list of railways in operation nor of those having granted supplementary pay is available, it is believed that the number of such agreements published in the Journal Officiel from October 17, 1917, to February, 1918, indicates that such increases have been general.

STATE RAILROADS.

The following item appears in the report of the committee having charge of the bill to vote additional credits for national expenses during the fiscal year 1917:[1]

In accordance with an agreement made between the Minister of Public Works and the more important railroad companies, dated November 10, 1916, which included the State railroad system, supplementary wages, owing to the increased cost of living, were granted to the employees, beginning with November 1, 1916.

(*a*) To all employees and laborers earning less than 3,600 francs ($694.80) per year, an increase of 15 per cent on that portion of wages

[1] Journal Officiel (supplement), Jan. 20, 1918, p. 1746.

not exceeding 1,200 francs ($231.60); 10 per cent on that portion between 1,200 francs and 1,800 francs ($347.40). (*b*) To those legally charged with the maintenance of children under 16 years of age an allowance of 50 francs ($9.65) for the first child, 100 francs ($19.30) each for the second and third child, and 200 francs ($38.60) for each child under 16 in addition to the third, provided their salary does not exceed 6,000 francs ($1,158) per year.

The earnings of those in class (*a*) or (*b*) receiving 3,600 francs ($694.80) or 6,000 francs ($1,158), respectively, shall be so increased as to equal the increased wages of those in the respective classes having like family charges.

But the persistent increase in the cost of living led to a new agreement July 2, 1917, by the terms of which no modifications of allowances granted to heads of families having children with whose maintenance they are legally charged were made, but the allowances under (*a*) were modified as follows: An increase of 30 per cent was granted on that portion of earnings under 1,200 francs ($231.60), 15 per cent on that portion between 1,200 francs and 1,800 francs ($347.40), and 10 per cent on that portion between 1,800 francs and 3,600 francs ($694.80), inclusive.

No increase shall be less than 420 francs ($81.06) for men or 180 francs ($34.74) for women. Temporary employees were given increases equal to permanent employees. For those receiving over 3,600 francs ($694.80) an increase was granted equal to that granted those receiving that amount, decreased by 30 francs ($5.79) for each 100 francs ($19.30) of wages in excess of 3,600 francs. The minimum wages for an adult female employee was fixed at 5 francs (96.5 cents) for a normal day's work.

This latter scale of wages became effective June 1, 1917.[1]

The total amount of these increases for the year was estimated to be, in round numbers, 28,018,000 francs ($5,407,474).

CIVIL EMPLOYEES.

In addition to the regular budgets voted on December 30, 1916, and March 31, 1917, and those authorized by special laws, credits were voted to the various departments of the civil government April 7, 1917, under the title of "Supplemental pay accorded to civil employees of the State during the War, because of the increased cost of living."

The credits thus voted amounted to 46,058,280 francs ($8,889,248.04), which were distributed as follows:[2]

[1] Journal Officiel, Jan. 20, 1918, p. 1773.
[2] Guerre de 1914. Documents Officiels. Vol. 17. Feb. 15 to Apr. 15, 1917, p. 223.

SUPPLEMENTARY CREDITS VOTED TO THE VARIOUS DEPARTMENTS OF THE CIVIL GOVERNMENT, FRANCE, APRIL 7, 1917.

Department.	Amount.	Department.	Amount.
Finance	$1,300,434	Labor and social welfare	$11,194
Justice:		Colonies	12,120
Judicial service	116,958	Agriculture	231,446
Penal service	85,267	Public works:	
Foreign affairs	15,363	Public works	331,358
Interior	91,328	Merchant marine	23,392
War	2,012,797	Mint (*Monnaies et Médailles*)	5,308
Armament and war manufactures	37,789	Government printing office	19,107
Marine	1,227,287	Legion of Honor	444
Instruction and fine arts:		Explosive service	4,516
Public instruction	1,884,491	National savings fund	13,896
Fine arts	29,606	Marine invalidity fund	347
Commerce, industry, post and telegraphs:		Total	8,889,248
Commerce and industry	21,770		
Post and telegraphs	1,413,030		

A decree dated May 3, 1917,[1] provided that beginning with January 1, 1917, allowances and increases for family charges (children under 16 years of age) should be accorded to the employees in the civil service of the State, in order that they may meet the increased cost of living.

The classes of employees benefited by these allowances are defined as follows:

1. Clerks, agents, and assistant agents (experts, clerks in training, and extra clerks) receiving monthly salaries.

2. Agents, assistant agents, and employees not included in class 1, but who are regularly employed or belong to an established category of employees and paid according to a regular fixed scale.

3. All other agents and assistant agents and employees having served in the same department five consecutive years.

4. Laborers permanently employed in the service of the State, or who shall have served five consecutive years in the same executive branch of service.

In no case are they accorded to (1) employees or apprentices under 16 years of age; (2) ad interim employees or persons temporarily employed because of war-imposed conditions; (3) employees whose employment in the civil service is supplemental to their profession; (4) persons who by virtue of any regulation are permitted to engage, while in the service of the State, in commerce or industry; (5) persons in the service of any department to whom increased remuneration, because of the increased cost of living, has been granted since the beginning of hostilities.

The annual allowance granted for increased cost of living is fixed at 120 francs ($23.16) for unmarried persons, and 180 francs ($34.74) for married persons as well as widowed, divorced or separated em-

[1] Guerre de 1914, vol. 18, p. 133.

ployees having one or more children under 16 years of age legally under their charge and living with them.

A bonus of 100 francs ($19.30) is granted for each child under 16 years of age, or incapacitated for work by reason of infirmities, and legally under the charge and living with the employee or laborer.

Laborers and others paid by the day, piece, or task are granted daily increases as follows: Unmarried persons, 45 centimes (8.7 cents); married persons, 65 centimes (12.5 cents), with an additional allowance of 37 centimes (7.1 cents) per child.

All increases and bonuses are payable monthly, and no absence not causing loss of pay is to work forfeiture, but the annual or daily allowances are not payable to persons who receive free lodging and board.

The annual allowances are payable to unmarried persons receiving annually not more than 2,000 francs ($386); to married persons receiving not more than 3,000 francs ($579); to persons having 1 or 2 children to maintain and receiving not more than 3,600 francs ($694.80); and to persons having more than 2 children and receiving not more than 4,500 francs ($868.50).

Persons paid by the day are not entitled to the allowances mentioned if the daily earnings exceed 6.66 francs ($1.29), 10 francs ($1.93), 12 francs ($2.32), or 15 francs ($2.90), according to whether they are single, married, have 1 or 2 children, or more than 2 children, to maintain.

In case the husband and wife are both in the service an increase is allowed to but one of them, only the salary paid the one who receives the highest remuneration being considered.

These allowances for increased cost of living are reduced, when it becomes necessary, to such an extent that the accumulated amount of the bonuses and the increased remuneration shall not exceed the maximum salaries mentioned above for the respective classes of employees.

Clerks whose salaries exceed 3,600 or 4,500 francs ($694.80 or $868.50) may be granted an allowance for family charges (maintenance of children) to such an extent as to equalize their income with that of persons receiving smaller salaries having like family charges. This applies also to persons paid by the day receiving 12 or 15 francs ($2.32 or $2.90).

In determining the earnings, salaries, or wages, pensions granted by the State, Department, commune, colony, or public works, as well as all wages or salaries paid by private enterprises to the employee are considered.

These bonuses are not payable to mobilized persons.

On August 18, 1917, a still further increase was granted, becoming effective July 1, 1917. The same classes of employees paid fixed wages or salaries, with like exceptions as to age, temporary service, supplemental service, or commercial or industrial status, are given a flat increase in wages or salary per year. These increases are declared to be temporary, and not subject to any deductions for pensions, and are as follows:

An annual increase of 540 francs ($104.22) for clerks, agents, etc., receiving not more than 3,600 francs ($694.80) per year; 360 francs ($69.48) for those receiving over 3,600 francs but not more than 5,000 francs ($965). Employees receiving between 3,600 francs and 3,780 francs ($729.54) receive an increase to bring their salaries to 4,140 francs ($799.02) at least, and those receiving between 5,000 francs ($965) and 5,360 francs ($1,034.48) receive an increase sufficient to bring their salary to 5,360 francs at least.

In determining the net salary of an employee deduction must be made for any sum reserved from wages for pension funds.

In addition to these bonuses an allowance for family charges is granted for children under 16 years of age, as follows: One hundred francs ($19.30) for each of two children and 200 francs ($38.60) for each child additional.

Employees receiving over 5,000 francs ($965) and having children to maintain are allowed a supplementary increase sufficient to equalize their salaries with the amount paid any other employee receiving 5,000 francs or less, having like family charges.

If both husband and wife are employed by the State, one of them only is entitled to the allowance for maintenance of children, and then only when the higher paid of the two receives a salary not exceeding 5,000 francs. If other forms of bonuses of similar nature have been previously granted, the employee may select the most advantageous, but they are not cumulative.

Assistants or temporary employees not included in the above classes, but who have been five years in the continuous service of any Government department are allowed an increase as provided by the decree of May 3, 1917 (above given), and an allowance for family charges as provided for clerks, etc., provided their salary does not exceed 5,000 francs, and that they are not of the excepted classes.

Laborers and employees paid by the day, piece, or task are granted a bonus equal in value to that granted those receiving annual salaries, the amount of such increases to be determined by each Government department, and approved by the Minister of Finance.

By ministerial decree [1] of October 27, 1917, the decree of August 18, 1917, was extended to the colonial penitentiary department.

[1] Guerre de 1914, vol. 21-22, p. 426.

Officials and laborers paid by the day receive an increase of 1.8 francs (34.7 cents) per working day, with a maximum monthly increase of 45 francs ($8.69) for those whose wages do not exceed 12 francs ($2.32) per day, and allowances for family charges of 37 centimes (7.1 cents) per day, with a maximum of 8.33 francs ($1.61) per month, for each of one or two children under 16 years of age, and 74 centimes (14.3 cents) per day, with a maximum of 16.66 francs ($3.22) per month, for each child in addition to the second. Family charges are payable in full even upon stoppage of wages, or when, due to sickness, half wages only are paid.

The executive of each Government department may by decree grant bonuses to cover increased cost of living, and allowances for family charges, to employees in the department, including those in foreign service, if such employees are French subjects.

MINIMUM WAGE.

MINIMUM WAGES IN MERCANTILE ESTABLISHMENTS IN KANSAS.

The industrial welfare commission of Kansas has recently issued an order, effective March 18, 1918, fixing a minimum wage of $8.50 per week for experienced women workers in mercantile establishments of that State. The apprenticeship period is fixed at one year, the minimum weekly wage for the first six months to be $6 and for the second six months, $7. The minimum for minors is to be $5 per week, and not more than 20 per cent of the force may be apprentices or minors.

This wage order supplements an earlier order establishing maximum hours of labor in mercantile establishments. Other orders, already issued, have dealt with hours of labor and sanitary conditions in laundries.[1]

The text of the new wage order is as follows:

No person shall employ any experienced female worker in any mercantile establishment in the State of Kansas at a weekly wage rate of less than $8.50.

An experienced female worker is any worker who has served the apprenticeship period. Any female worker who can show to the satisfaction of the commission that she has had experience equivalent to such apprenticeship shall receive the minimum wage without the apprenticeship in this State. The length of the apprenticeship term for female workers in mercantile establishments shall be one year, and such apprenticeship term shall be divided into two periods of six months each.

No person shall employ any female worker except as hereinafter provided in any mercantile establishment for the first period at a weekly wage rate of less than $6, or for the second period at a weekly wage rate of less than $7.

Minors employed in mercantile establishments in the capacity of bundle wrappers and cash boys or cash girls shall be paid not less than $5 a week, after six months of service shall be paid not less than $5.50 a week, and after 12 months not less than $6 per week. Not more than 20 per cent minors and apprentices shall be allowed in any one establishment.

Said order shall become effective on and after March 18, 1918.

After such order is effective, it shall be unlawful for any employer in the State of Kansas affected thereby to fail to observe and comply therewith, and any person who violates said order shall be deemed guilty of a misdemeanor, and anyone convicted thereof shall be punished by a fine of not less than twenty-five dollars ($25) nor more than one hundred dollars ($100) for each such misdemeanor.

[1] See MONTHLY REVIEW, October, 1917, and February, 1918, for these earlier orders of the Kansas Industrial Welfare Commission.

WOMEN IN INDUSTRY.

EFFECT OF THE WAR UPON THE EMPLOYMENT OF WOMEN IN ENGLAN

BY MARY CONYNGTON.

In tracing the effect of the war upon the employment of women England, three distinct phases are visible: First, the period of widespread unemployment and of organized effort to relieve it; second, the reabsorption into industry of the unemployed women, often into some industry in which they had formerly played but a minor part, accompanied by their transfer from one industry to another; and third, an organized effort to increase the supply of women workers, to induce women who had left industry to return to it, women who had never worked for wages to take up gainful employment, and women working in the less essential to transfer to the more essential trades. These phases are not sharply differentiated; all three might and to some extent did exist at the same time, though in different localities and occupations. Owing partly to the immobility of labor, especially female labor, and partly to the difficulty of putting a worker trained to one kind of work into another and totally different trade, it has happened that women in one industry might be working on short time, or actually unemployed, while in another there was a crying need for help. Nevertheless, these three stages were in the main consecutive.

UNEMPLOYMENT; RELIEF MEASURES.

The immediate result of the war was widespread unemployment. In July, 1914, not including women working as employers or on their own account or as domestic servants, there were in England and Wales some three million and a quarter women gainfully employed. Of these, 2,184,000 were in industrial pursuits, the largest single group, 863,000, being in the textile trades; then came the clothing trades with 620,000; next in order but far below came the food trades with 196,000, the metal trades with 170,000, and the paper and printing trades with 147,000. The wood trades employed 44,000 and the chemical trades 40,000. Of those not industrially employed, commercial occupations accounted for 496,000, the local government service took 198,000, the civil service employed 66,000, agriculture 80,000, and the transport service 19,000.[1] Excluded from

[1] The Labour Gazette, London, August, 1917, p. 274.

this enumeration are an uncertain number of women working or in trade on their own account, and the great body of domestic servants, who in the census of 1911 were given as numbering 1,734,000.[1] Allowing for the natural increase from 1911 to 1914, it is estimated that altogether at the outbreak of the War there were approximately five million women at work in England and Wales.[2]

Among these the immediate effect of the declaration of war was even more disastrous than among men. The stoppage of commerce and industry due to the financial shock, the disorganization of the coal, iron, and steel industries, the cancellation of contracts with the warring countries, the interruption of the transport system, and the impossibility of securing raw materials for manufacture, affected them as seriously as the men, while the panic economy which caused an almost complete stagnation of the luxury trades fell with special severity on women. Thousands of dressmakers, milliners, workers in flowers and feathers, lace makers, and the like were thrown out of employment; laundresses found their trade gone, and domestic servants, ladies' maids, and charwomen were dismissed. August was a time of such confusion that no figures of unemployment among women were obtainable, but in September the published data show a serious situation:

> In London alone between 40,000 and 50,000 women and girls are out of work. In addition to these, 200,000 women and girls are working short time. In laundries * * * between 3,000 and 4,000 have been discharged, and of the remainder over 20,000 are earning on an average about half of their usual wages. Hundreds of women have been dismissed in the printing trades, and the large majority are working short time.[3]

Taking the whole country, instead of London alone, the Labor Year Book states that by September the number of women employed in the staple industries, excluding agriculture, had decreased by 190,000,[4] while many more were working less than full time.

To some extent the situation was met by relief work. In August a central committee on women's employment was formed which opened workrooms and training centers, and also did something in the way of inducting women into new trades. During the winter of 1914–15 there was much demand for the services of this committee, and by March 31, 1915, its disbursements amounted to £72,953[5] ($355,025.77); during the next six months they sank to £15,967[6] ($77,703.41), while during the winter of 1915–16 only £241[7] ($1,172.83) was advanced in aid of women's workrooms. Thereafter

[1] Census of England and Wales, 1911; Occupations, Part I, p. 76.

[2] Fabian Tract, No. 178: The War, Women, and Unemployment, by Sidney Webb, p. 4. Fabian Society, London, 1915.

[3] Daily Citizen, London, Sept. 10, 1914.

[4] Labour Year Book, 1916, p. 79. 1 Victoria St., London.

[5] Report on the Administration of the National Relief Fund up to March 31, 1915. (Cd. 7756.)

[6] Report on Administration of the National Relief Fund up to September 30, 1915. (Cd. 8169.)

[7] Report on Administration of the National Relief Fund up to March 31, 1916. (Cd. 8286.)

unemployment among employable women became a matter calling for transportation rather than relief, and the committee's work was directed into other channels.

REABSORPTION OF UNEMPLOYED WOMEN INTO INDUSTRY.

The process of reabsorption of unemployed women into the ordinary course of industry began at an early period after the first shock of war. The demand for clothing for the army was immediate, and firms competent to handle this work needed every worker they could get. Unfortunately, however, not all sewing women were qualified for this work, so although this relieved the situation there was still much distress among workers in the needle trades. Other kinds of work showed an improvement, although the process was slow. By the end of October, 1914, the Board of Trade reported that employment among women had shown considerable improvement, chiefly owing to the demand for army goods; the cotton trade had improved slightly, although much short time still prevailed; the woolen, worsted, hosiery, and dyeing trades showed improvement, but dressmakers, servants of various kinds, and "clerks and typists formerly employed in commercial houses with a continental trade" were still finding it difficult to secure employment.[1] In spite of this improvement, however, the number of women employed was smaller by 139,000 than in July, 1914, and many of those at work were on short time. In the following months occurred one of the earliest notices of the flow of women into the engineering trades. In this line of work, declares the Labor Gazette—[2]

> Employment in November was very good, * * * the demand for men on work connected with the war exceeding the supply, and overtime being in operation to a large extent. * * * Employment was very good upon Government work, especially at Newcastle, where additional men and women from Lancashire were engaged, and night shifts and overtime were in operation.

With the coming of the new year improvement was manifest along several lines. The clothing trades were busy, and from January, 1915, onward, the Board of Trade labor exchanges reported more applications from the tailoring trade for female workers than could be satisfied. Women were entering the metal trades in constantly increasing numbers and were making their way into other trades which had not theretofore been open to them. For a time this process was checked by the opposition of the men workers. The great demand for women was in the production of munitions and equipment for the forces. Many of the trades involved were in the hands of strongly organized unions of highly skilled men, who looked with grave distrust upon the introduction of untrained women and the inevitable breaking down of trade-union standards which this

[1] Board of Trade Labour Gazette, November, 1914, p. 395. [2] Idem, December, 1914, pp. 437, 438.

implied. The Government held a series of conferences with the trade-unions over the questions, and by April, 1915, a compromise had been arranged, under which women were thereafter employed without question, not only in munitions factories, but in all controlled establishments.

By the time this agreement was reached the scarcity of workers caused by the enlistment of the men was becoming apparent in some of the nonmunition trades. The Government compromise suggested the way of meeting the opposition of the men, and agreements were made between employers and trade-unions in several trades providing for the admission of women to what had always been considered men's work. The agreements usually stipulated that the relaxation of trade-union rules was for the duration of the war only, that at its conclusion the men who had gone into the army should have their old places back, and that none of the women should be retained unless there should be a scarcity of male help. In the chinaware and earthenware trades such an agreement was signed in May, 1915, and in the same month the union of slipper makers agreed to a similar relaxation of rules. The unions of the boot and shoe trade fell into line in June; in July a general agreement was reached between the employers' and the operatives' associations in the cotton trade of Lancashire, and within the next six months a number of agreements were signed between the employers and the unions in the cotton trade throughout England. Brass workers signed similar agreements in October, and hosiery workers in December, so that by the end of the year the admission of women to new trades and occupations had made considerable progress.

Long before the end of the year, too, the Government was making strong efforts to increase their numbers, both in the munitions trades and in several other kinds of work. By the spring of 1915 the importance of the munitions supply was keenly realized, and at the same time Kitchener was calling for more and more men. Women could be used to free men; so a campaign of patriotism was preached, calling on women to come into the factories and make supplies for the men who had left. In the main, during 1915, these workers seem to have come from the women already engaged in wage earning, or who had at some previous time been so engaged. The class of domestic servants supplied many of them, and complaints about the scarcity of household workers began to appear before the middle of the year. As the need for more skillful workers became greater, the Government started training classes for munitions workers, in which women learned how to handle the tools at which they would first be put in the factories. Some of the large munition makers did the same thing. As the year wore on and some of the factory workers showed signs of

breaking under the strain of long hours and continuous speeding up, a new development arose—the training of the week-enders. These were usually women of some means and some leisure, who did not wish to enter the munitions trades as a permanent thing, or were unable to do so, but who could and would give a day or more at the end of the week in order to replace some regular worker, assuring her an intermission of 24 hours—for at that time the seven-day week was common. Training classes were established for these week-end workers, and by November it was reported that the plan, which had been begun at Erith, had been extended to the Tyne and Clyde districts, and that "hundreds of educated women are now employed at the week-ends in this way."[1]

On March 22, 1915, the Government appointed a committee "to consider the conditions of retail trade which can best secure that the further enlistment of men or their employment in other national services may not interfere with the necessary operations of that trade." The substitution of women for men was still looked upon as a dubious experiment, so the committee went about its work cautiously and not before October did it bring in a report. As a beginning, it had asked employers whether they would be willing to reinstate at the end of the war men who had left in order to enlist, and many of the employers had promised to do so. Therefore, it was urged, no unfairness to men would result from the employment of women. This point being settled, the committee reported that women could be substituted for men largely, even in occupations like that of driving delivery vans, which at first thought seemed entirely unsuitable. Men could not be altogether dispensed with, as in some of the retail trades there was need of handling goods too heavy for women to manage, but even here, by rearranging the work, a small nucleus of men would be sufficient, women taking over everything but the heaviest work. Various difficulties would be found in adapting the conditions and customs of the work to women, but the committee thought these could be overcome, and reported that employers in general seemed willing to make the experiment. Going outside the strict limits of its commission, the committee also recommended that women should be employed in the wholesale trades. This, it found, had been done in a number of large establishments, and had resulted "in the freeing of a very remarkable number of men from the wholesale warehouses for enlistment in the forces."

At just about the time this committee was making its report another was appointed "to consider the conditions of clerical and

[1] Women's Employment, issued by the Women's Employment Publishing Co. (Ltd.), 5 Princes St., Cavendish Square, W. London, Dec. 3, 1915, p. 9.

commercial employment with a view to advising what steps should be taken, by the employment of women or otherwise, to replace men withdrawn for service in the military forces." The need for men was acute by this time, and the idea of using women in their places had lost its strangeness, so this committee went to its point very directly. There were still about 300,000 men engaged in these occupations in England and Wales, it found. Some of these were not physically capable of military service, and some on account of their specialized training and long experience were indispensable if the commerce of the country were to be carried on. Altogether, perhaps as many as 150,000 could be spared for the army. Substitutes must be secured in the main from among women. To a considerable extent women were already being drawn on, but for the most part they were not trained in clerical work, and it was highly desirable to establish courses of training at once. As in the case of the committee on retail trade this committee expressly stated that this employment should be looked upon as only a temporary expedient and that employers should hold their places for the men who enlisted. Also, it was suggested that women's wages should, "as far as conditions permit and the work deputed to them reasonably justifies," be based on the rate of wages paid the men they replaced.

A beginning was also made during 1915 in substituting women for men in agriculture. As the shortage of farm labor became apparent, there were numerous propositions to release children from school that they might take up the work. There was considerable opposition to this course, and the employment of women was urged as an alternative. The trouble with this plan was that it did not appeal either to the farmers or to the women. The farmers were doubtful about the ability of women to do the work, objected to the difficulty of accommodating them, and were much disinclined to pay them any wage which would attract them. The women objected to the low wages and the unattractive conditions of work, and were far more inclined to go into other occupations. By March the Board of Trade, in consultation with the Board of Agriculture, decided upon active steps to recruit women for service on the land. A central committee—the War agricultural committee—was formed, and it was planned to organize under it committees of women in every county who should work up a sentiment in favor of farm work for women. By the end of the year the committees were well organized and carrying on an active propaganda. A large number of women were enrolled through these efforts—17,000, according to one report[1]—but as enrollment only meant that a woman was willing to put in at agricultural labor such time as she could spare, the amount varying

[1] Women's Work on the Land, by G. A. Greig, London [1916], p. 27.

from a few hours a week to full time, it was quite uncertain how helpful this registration might prove.

By the end of 1915, then, unemployment among women had greatly decreased, and what remained was either local or confined to a few classes. The general effort to economize had resulted in much unemployment for woman housekeepers, governesses, companions, and the like. Workers in the luxury trades who had not transferred to other callings also suffered, and so did the professional and semi-professional classes. Among these, doctors and nurses were in much demand, but musicians, artists, and those of similar callings found little to do in their own lines, and were not well adapted for taking up the trades in which women were wanted.

As to local unemployment, a good deal had been done in the way of transferring women from places where their work was not needed to places where it was in demand:

> In the West Midlands district alone, where before the war the migration of industrial women was practically unknown, over 4,000 women were during 1915 placed by the employment exchanges in employment away from their own districts, the greater number on munitions work, and others as artificial silk workers, rubber workers, chocolate makers, farm hands, and as substitutes for men in various kinds of work.[1]

On the whole, during the year 1915 the nation seemed more inclined to use the muscles than the minds of its women. As manual workers they were welcome, but there was much hesitation about admitting them to the better paid and more responsible pursuits in which intelligence and training were needed. One of the women's journals thus sums up the situation at the end of the year:

> It has been chiefly in voluntary work that the woman of the professional class has found new outlets. * * * There are women capable of filling a number of higher posts which have not yet been opened to them. Up to the grade of simpler clerical work replacement has been going on; above that line, except in the teaching profession, replacement has hardly begun.[2]

EFFORTS TO INCREASE SUPPLY OF WOMEN WORKERS: DEVELOPMENTS OF 1916.

During the year 1916 the problem of unemployment among women practically passed from sight, and what has been called the second phase, the reabsorption of women into industry by natural demand, passed into the third, the period of sustained effort to secure all available workers and to increase the supply by inducing those who had never before been wage earners to become such. Early in the year the Government issued an appeal to employers pointing out the vital importance of keeping up production in spite of the reduction of man power, and urging them to make every possible effort to

[1] Board of Trade Labour Gazette, London, March, 1917, p. 93.
[2] Women's Employment, London, Dec. 3, 1915, p. 7.

utilize women for this purpose, either in direct substitution for the men who had been withdrawn or by some subdivision or rearrangement of their work. As one step toward securing this result local committees to deal with the question of women's employment were established in various parts of the country. These committees were formed of representatives of both employers and workpeople, and included also members of such organizations as the Women's Cooperative Guild, the Y. W. C. A., and the like. In general they were authorized to assist the local labor exchanges in extending the employment of women in industry, and in this capacity their functions varied considerably from place to place. As a beginning the employers of the district were generally canvassed to find out what were their needs, present and prospective, in the way of women workers. Armed with this information, the committee set out to find the workers. In some places a house-to-house canvass was undertaken to find women willing to take up the work; in others, public meetings were held, handbills and posters displayed, funds were raised to enable workers to journey to the places where they were needed, crèches were started in which married women might leave their babies while they went to work, and generally every effort was used to bring in the workers. Employers, too, were labored with.

> Active efforts to extend the substitution of women for men in industry have been taken by the committees at Leeds, Leicester, Nottingham, and other places, and conferences have been arranged with employers in the leading trades in these towns to discuss the matter. Successful steps have been taken by the Bristol committee to persuade a number of unemployed women to undergo a training for work in the boot trade hitherto performed by men.[1]

Another feature of the year 1916 was the increased effort to interest women in farm work. No one was as yet ready to declare food raising as important as munition making, yet it was becoming increasingly evident that food must be had, that the supplies obtainable from abroad were smaller than usual, and that the U-boat warfare, combined with a scarcity of tonnage, made it highly desirable to raise as much as possible in England. Consequently the women's county War agricultural committees, which had been organized in 1915, became centers of active propaganda. The counties were subdivided and local committees or registrars or both appointed for each village. Public meetings were held, house-to-house canvasses made, armlets and certificates were issued to those who took up the work, and the strongest possible appeal on grounds of patriotism was made to women to become farm workers. It was freely admitted that wages were distressingly low, that work was heavy and hours long, but

[1] Board of Trade Labour Gazette, London, November, 1916, p. 408.

then "the need was a national one.[1]" On the same grounds of patriotism, farmers were urged to employ women, especially for all the lighter forms of farm work; the idea of light work seems to have included everything but plowing.

While the county agricultural committees were proceeding along these lines, a private organization, the Women's National Land Service Corps, was formed "with the object of speeding up the recruitment of all classes of women for work on the land, in order to insure the maintenance of the home-grown food supply." This body approached the problem from a different angle. If absolutely untrained women were placed on farms without any preparation, they would almost infallibly make a failure, no matter how good their will; and this failure would still further prejudice the employer against women workers. Therefore, this organization, while not neglecting propaganda, devoted much energy to providing a course of training for intending farm workers, and to sifting out applicants who were physically unfit, or who showed a lack of adaptability for the kind of work and discipline farm life requires. Also, after a woman had received her training, the organization took care that she should be placed with a suitable employer, saw that her accommodations were adequate, even if rough, and kept in touch with her by correspondence or visits until the first loneliness of her new position had worn off and she had fitted into place. The corps was organized in February, 1916. By the end of September it reports having placed some 2,000 women, either as permanent workers or as untrained workers in gangs.[2]

Throughout the year 1916 the Government maintained and extended its efforts to secure munition workers. In February the ministry of munitions issued a report giving an account of the training provided for educated and intelligent men and women who were willing to take up munition work, and who by means of this training could "quickly be trained to certain limited but nevertheless skilled operations." Special emphasis was laid on the opportunities this training offered for women, and on the desire of the ministry to increase the number of women thus preparing themselves for something better than the unskilled work on which they had at first been

[1] "A representative of the Board of Trade at a meeting at Scarborough said that the wages would be from 12s ($2.92) to £1 ($4.87). Twelve shillings is not a proper living wage for a woman: and our masters seem to know this. The Daily News, in explaining the Government scheme, says: 'It is frankly admitted that much of the most necessary work is hard and unpleasant and by no means extravagantly paid. That is why the appeal is made exclusively to the patriotism of the women. There is no question (as in the army itself) of any really adequate reward.' Well, why not? The farmers are doing very well. The price of corn is higher than has ever been known before. Why should women be deprived of 'any really adequate reward?' * * * If there were 'no question, as in the army itself,' of any really adequate profits then there might be something to be said for the Government. As it is, no armlets and no 'patriotism' ought to make women work at less than a living wage."—The Woman Worker, London, March, 1916, p. 4.

[2] See Interim Report of the Women's National Land Service Corps, London, pp. 14, 15.

employed. In October the ministry published an appeal for women to take training at the centers established by arrangement with the educational authorities in various parts of the Kingdom. "It is especially desired to train persons who are not at present employed in any form of directly productive work." Courses were given leading up to skilled work, and the centers were sufficiently numerous and well distributed to be easily available to those wishing to use them.[1]

In industry generally the process of relaxing trade-union restrictions which interfered with the employment of women went on at an accelerating rate. During the year agreements permitting their employment in processes formerly closed to them were signed by unions in the following industries: Gold, silver, and electro plating, oil seed and cake manufacturing, woolen and worsted, hosiery, dyeing and finishing in the hosiery trade, textile bleaching, dyeing and printing, elastic web and braid, lace, wholesale clothing, boots and shoes, gloves, clay tobacco pipes, printing trades, brushes, cutlery, tobacco, and leather. In a number of other directions the bars were let down and positions theretofore reserved for men thrown open to women. In May, at a conference on openings for educated women, opportunities were reported in actuarial work, aircraft work, wireless telegraphy, as dental mechanics, in optics, journalism, chemistry, and work in military hospitals.[2] There was an increasing demand for nurses, and for trained women to act as health visitors, and to aid in the campaign for the preservation of infant life. Women were employed on the railways and in the postal service. They were taken on as cooks in camps and in military hospitals in place of men; they were accepted as clerks in the army pay corps, between 700 and 800 men being thus released for service elsewhere; they were employed as mail censors; they found places for the first time on the staff of Scotland Yard; and the War Office depots for sick horses were placed entirely in their hands. To a limited extent they were even beginning to be officially employed as policemen. As volunteer constables they had been doing good work since the beginning of the war, but it had taken two years to convince the local authorities that there was merit in the scheme.

By the end of 1916, then, women were found in every branch of munition work, and in most forms of manual work. They had entered innumerable occupations theretofore closed to them, for many of which they were supposed to be unfitted, but in which they were making good. The number filling clerical and commercial positions had increased enormously, and so had the numbers engaged in trans-

[1] Outline of courses published in Women's Employment, London, Oct. 20, 1916, p. 6.
[2] Women's Employment, London, June 2, 1916, p. 12.

portation and in the less responsible positions in the Government service. They were even making their way, although slowly, into the better paid positions, especially in the lines of scientific work, and in manufacturing processes, like acetylene welding and optical work, requiring skill and ability.

DEVELOPMENTS OF 1917.

The year 1917 was characterized by a greater attempt to coordinate the various methods of securing women for industrial and commercial work, by greater efforts to obtain women for semiskilled, skilled, and professional positions, by their increased employment in agriculture, and by their definite enlistment for army services of every kind except the actual fighting and digging.

Early in the year a Women's Division of National Service was formed and placed under the direction of a woman. The general plan was that all women should be encouraged to look upon themselves as volunteers in the national service. As a need for them arose in any industry or locality, appeals would be issued, stating wages and conditions of work, subsistence allowance if the work were at a distance from the worker's home, and asking details as to the worker's qualifications. All willing to serve would fill out certain forms, and with these data before her the director could assign those apparently best fitted for the work to the place where they could apply themselves most effectively for the general good. A similar scheme had been designed a little earlier for men, and the two divisions were expected to work in close cooperation. It is difficult to get details of the work of this division. Its two best known fields of operation were in connection with the Women's Army Auxiliary Corps and the Women's Land Army.

At the end of February, 1917, the War Department issued a call for women to enroll for army service at home and in France. Volunteers were needed for clerical work, cooking and domestic work, motor transport service, storehouse work, telephone and postal service, and miscellaneous services. Wages were to range from 20 shillings ($4.87) a week upward, with deductions for board and lodging. The recruiting for this corps was placed under the charge of the Women's Division of National Service, and the response to its appeal was prompt. By April 4 women to the number of 35,000 had registered as volunteers.[1] At that time 5,500 were needed abroad, and these were being sent over as quickly as accommodations could be prepared for them. Later, as the scheme proved workable, the demand for volunteers increased rapidly. In the early autumn it was announced that 10,000 women were needed before the end of October, and "It is anticipated that after that they will be needed

[1] Questions in Parliament, quoted by Women's Trade-Union Review, London, July, 1917, p. 26.

at the rate of about 10,000 a month."[1] The discipline and general management of the corps were in the hands of women known as administrators. None of the women was called an officer, and there was no saluting, but the administrators had authority similar to that of commissioned officers. Courts of summary jurisdiction were instituted to take the place of the courts-martial of the men's army.

The Women's Land Army was a less spectacular but a no less useful development. At the beginning of the year when it was decided to conscript many of the skilled men heretofore considered indispensable, it had become plain that agriculture would suffer severely just at the time when there was special need for an increased production of foodstuffs.

Early in January the National Land Council appealed for 20,000 women to undertake farm work.[2] The response was not satisfactory, and in March the Women's Division of National Service issued an appeal for a land army of women. This brought in volunteers, but as comparatively few were trained in farm work it was necessary to start centers in which they could receive intensive training in some branch of agriculture, after which they were either placed on farms or formed into groups which, camping, so to speak, in the midst of a farming district, went out daily to work where their services were most needed. No information is available as to how many were thus trained. In July it was stated in Parliament that 5,243 women, national service volunteers,[3] had been placed either on farms or in instruction centers, and it was added that many others "had gone in on their own." A sufficient number seem to have been obtained to carry on the work in a fairly satisfactory manner.

Along other lines the tendencies shown in 1916 continued and were strengthened. The conscription of men heretofore considered indispensable opened up new positions to women. Especially was there need of women in medicine, in nursing, and in pharmacy work. There was a scarcity of trained nurses, and a committee of the Army Council, considering ways and means of meeting it, urged an improvement in the wages and treatment accorded nurses by way of making the service more attractive. In clerical work apparently few positions were now closed to women. In manufacturing they were still in many cases restricted by trade-union opposition, yet practically there were abundant openings for all who were in any way skilled. There was no shortage of woman labor, but there was a distinct shortage of skilled women.

The three years of the war, then, had seen a marked change in the industrial position of women. During the first there had been much

[1] Christian Science Monitor, Boston, Oct. 20, 1917.
[2] Manchester [England] Guardian, Jan. 5, 1917.
[3] Local Government Chronicle, London, July 21, 1917.

unemployment, in spite of the admission of women into trades new to them, in which for the most part they did either unskilled or routine work. During the second there was a growing demand for their services, and more responsible and better paid positions were opened to them as the men withdrew. During the third year there was an earnest effort to secure trained women and to utilize effectively the woman power of the country in posts of every kind, ranging from the domestic work which they had always done through all grades of manufacturing and clerical work up to supervisory positions, professional work, and places of official responsibility.

CHANGES IN DISTRIBUTION OF WOMEN WORKERS, 1914 1917.

The question of how numerously women were drawn into gainful pursuits by these changing conditions, what work they took up, and how they are now distributed as compared with their distribution before the war is of importance, but can be only partially answered as yet. Their distribution at the latest period for which official data are available is shown in the following table:

SUMMARY OF POSITION IN REGARD TO EMPLOYMENT OF WOMEN, OCTOBER, 1917.[1]

Occupation.	Estimated number of females employed, July, 1914.	Increase in the employment of females since July, 1914.	Number of women directly replacing men.
Industries	2,176,000	530,000	490,000
Government establishments	2,000	214,000	202,000
Gas, water, and electricity (under local authorities)	600	4,000	4,000
Agriculture in Great Britain (permanent labor)	80,000	9,000	33,000
Transport (excluding tramways under local authorities)	17,000	76,000	78,000
Tramways (under local authorities)	1,200	17,000	16,000
Finance and banking	9,500	58,000	55,000
Commerce	496,000	335,000	337,000
Professions	67,500	22,000	22,000
Hotels, public houses, cinemas, theaters, etc	176,000	24,000	44,500
Civil service, post office	60,500	46,500	52,000
Other civil service	4,500	60,500	55,000
Other services under local authorities	196,200	30,000	24,000
Total	3,287,000	1,426,000	1,413,000

[1] From The Labour Gazette, London, February, 1918, p. 48.

This does not tell the whole story, since domestic servants and women in small dressmaking establishments are excluded, as well as women in the military, naval, and Red Cross hospitals. Under the last head there has been an increase in the number of women employed equal to 43,000 full-time workers. On the other hand, it is estimated that some 400,000 women formerly in domestic service or small dressmaking shops have left these for the lines of work shown in the table. Allowing for both these factors, it is believed that there has been an increase, since July, 1914, of about 1,070,000 women employed in occupations outside of their homes.

The largest proportionate increase in the number of women is shown in the Government establishments, but the largest actual increases

are in the combined industries, which have taken in 530,000 women, and commerce, with an increase of 335,000. The increase in agriculture is affected by the season at which these data were taken; in July, 1917, it showed an increase of 23,000 over the number employed three years before. By far the greater part of the increased employment of women, it will be observed, is due to the replacement of men by women. About 700,000 women, it is estimated, were engaged at this time in munitions work and about 650,000 in other industrial Government work.

A question naturally arises as to how far the women substituted for men are really filling the places of the men. The reply varies with the work. In clerical and banking positions apparently women are fully replacing men, except in the relatively few positions requiring long training and experience, which they have not yet had time to acquire. In commercial positions the general opinion seems to be that they are taking the work in a satisfactory manner, although rearrangements and adjustments have been necessary. In industrial occupations where physical strength is required they are of course at a disadvantage; elsewhere their success seems to vary with their experience. In the munitions trades, where they have had perhaps the best chance to show what they can do, they have proved highly satisfactory, but in general their work has not been the same as that of the men whose places they have taken. Operations have been subdivided, and a woman does only one, or at the most, two or three parts of a process, instead of performing the whole complex operation. In this subdivided work the women have attained great efficiency, and they are being advanced to other work requiring skill, accuracy, and judgment, but they are not yet all-round mechanics. Whether they can become such, only time can show; but they have at least proved that they have inherent ability to handle skillfully tools and machinery.

PROTECTIVE CLOTHING FOR WOMEN AND GIRL WORKERS IN GREAT BRITAIN.

The entrance of a large number of women and girls into industry in Great Britain since the outbreak of the War has introduced new problems affecting factory and workshop equipment and management which had not previously concerned employers whose working forces had been made up of men and boys almost exclusively. One of the most important questions presented by the new conditions, and one that necessarily must be given serious consideration if the highest speed and efficiency are to be obtained in manufacturing material incident to the war, is the matter of serviceable and suitable clothing so designed as not only to protect women and girls from the grime and

dirt of work, but more particularly to furnish a covering that shall render them less liable to accident from moving machinery or injury to health, and on the whole minimize the dangers of factory and workshop operations.

As a guide to employers and workers the British Home Office has recently issued an illustrated pamphlet of 15 pages [1] describing the different types of protective clothing recommended, and specifying in respect to each process in which there is special need for such clothing, the nature of the risk to be guarded against together with suggestions as to the particular type of clothing to be worn to protect against such risk. The recommendations are based upon information supplied by factory inspectors whose official visits have shown them that in the great majority of cases the need for protective clothing arises from one or other of the following causes: (1) Dusty or dirty processes; (2) working about machinery, climbing ladders, etc.; (3) use of acids or caustic liquids; (4) wet processes; (5) excessive heat; (6) exposure to weather. In presenting the recommendations it is explained that the statement does not include processes in trades certified as dangerous under the factory act where protective clothing is already required by regulations, but it includes the chief manufacturing processes in which, though not brought under regulations, protective clothing has been found to be required for safeguarding workers against accident or injury to health, or for securing comfort and convenience in their work, or for protecting their ordinary clothing against damage caused by materials, machinery, etc.

Two general types of dress are described—(1) The overall suit, and (2) the trouser or knicker suit with tunic—as being suitable wherever the work is dusty or dirty or where women are employed on or near machinery not of a specially dangerous character. Where there is exposure to acids or alkalis, excessive wet, machinery involving special risk, excessive heat, or where the employment is in the open air, special types have been designed and are recommended. All these types of clothing are illustrated in the report, but reproduction here is impracticable and resort must be had to the following descriptions which are quite adequate and furnish an excellent idea of the Home Office recommendations.

Type A.—Overall dress and cap; also apron in some cases. No outside pockets; sleeves to fasten closely at wrists.

Type B.—Trouser or knicker suit with close-fitting coat or tunic, and leggings. No outside pockets.

Type C.—Overall dress or trouser suit of woolen material (baize, etc.); cap; leather apron (with bib); and high-topped waterproof boots, or leather or flannel leggings, or

[1] Great Britain. Home Office. Protective clothing for women and girl workers employed in factories and workshops. Prepared by the Home Office from information supplied by H. M. inspectors of factories. London, 1917. 15 pp. Illustrated. Price, 3d. net.

puttees covering the open tops and lace holes of clogs or boots. Gloves, in some cases, of rubber. Goggles where there is risk of splashing.

Type D.—Overall dress or trouser suit; cap; apron (with bib) of waterproof material such as rubber, oilskin, mackintosh, pegamoid, or leather; and high-topped waterproof boots, or leggings or puttees covering the open tops and lace holes of boots, or clogs.

Type E.—Boiler suits; cap. No outside pockets; sleeves to fasten closely at wrists.

Type F.—Thin overall dress or trouser suit; cap. The material may be cotton, drill, or jean, etc., or linen, of thickness according to need.

Type G.—Weatherproof coat or trouser suit and clogs; waterproof cap ("sou'wester").

In Part II, which sets forth the processes, the nature of risks to be encountered, and the type of clothing recommended, the latter is designated by letter to correspond with the descriptions noted above, and in some cases additional suggestions are made as to supplementary clothing that may be worn as an added protection against the risk. For example: under metal processes, in molding and core making, where the risk is from particles of metal or scale, the clothing recommended is "A, with leather gloves and clogs. Goggles in some cases." Other instances, selected at random, indicate the completeness of the tabulation of processes, the risk involved, and the type of clothing recommended in each case:

MANUFACTURING PROCESSES, NATURE OF RISK, AND TYPE OF CLOTHING RECOMMENDED TO BE WORN BY WOMEN AND GIRLS IN FACTORIES AND WORKSHOPS IN GREAT BRITAIN.

Process.	Nature of risk.	Type of clothing recommended.
Airplane works: Doping	Varnish	A, with apron.
Brick works	Exposure to weather	G.
Chemical process: Chlorate	Burns	A or B, fireproofed material, washed daily.
Engine house	Danger from machinery	E.
Food production: Milk drying	Heat	F.
Metal process: Acetylene welding	Burns	Drill overall dress, leather or asbestos cloth apron, tinted glass goggles, and gauntlets.
Metal process: Galvanizing	Acid	C.
Metal process: Grinding and turning	Wet and metal particles	D, with goggles in some cases.
Sand blasting: Inside chamber	Dust and grit	B or E, with helmet and breathing tube.
Textile and allied processes: Chrome dyeing.	Wet and chrome ulceration.	D, with rubber gloves where hands are immersed in chrome solutions.

EMPLOYMENT OF WOMEN IN FOUNDRIES IN GERMANY.

The Technik und Wirtschaft (December issue) quotes an article from Stahl und Eisen, Düsseldorf (No. 35, 1917), on the results obtained in Germany from the employment of women in war industries and especially in foundries, which may be summarized as follows:

In introducing women into workshops the choice of a proper teaching staff is of the greatest importance. The method generally adopted of handing over newcomers to an old worker or to a woman, brings about the desired results very slowly, and only after many failures. Also, it has often proved a bad practice to have the training of women undertaken by the foreman of a shop, as sometimes

one of the pupils is neglected, or the foreman does not possess the necessary teaching capacity, and instead of explaining matters to the newly employed women in a clear and simple manner, he renders his explanations unintelligible by using technical terms.

On the contrary, very good results have been obtained by the writer of the article with women as teachers. These were chosen from among the women who had been in the works since the beginning of the war, and had attained the rank of forewomen. It can easily be understood that even women who have only been employed in a factory for a relatively brief period are able to impart their knowledge and experiences in a clearer and more practical manner to other women than a foreman who has been brought up in his employment, and who looks upon many things as a matter of course, which are not at all comprehensible to beginners. There is no doubt also that, with the help of a female training staff, women who have never been employed in workshops are made familiar with factory work much more easily.

Experiments have been made by a large engine-building concern in southern Germany in training as forewomen women of the middle class who had never before worked in factories. This was done because it was assumed that this type of woman would do her duty more conscientiously and with more authority than a forewoman taken from among the working classes. In workshops manufacturing bulk articles, where very little training is required, women of the middle classes, when employed as forewomen, have proved a success. The output of the women is only in exceptional cases equal to that of the men; as a general rule the average is two-thirds or three-fourths of a man's production. The use of special clothing for women, such as vests, trousers, and caps, had a very favorable influence on the increase in production. By wearing male attire women are able to undertake work of a kind which they had hitherto been prevented from doing, and as a result of this it has been possible to reduce the number of male employees. Another consequence of this special attire for women is that they are better able to resist changes of temperature (which exist in foundries), and are thus less liable to catch colds. Vests, trousers, and caps also give better protection against dust, and above all are a safeguard against accidents.

Women can be employed in all sorts of capacities in foundries—on heavy as well as light work. The only tasks they can not undertake are working without supervision on larger hand castings and attending to the furnaces. Hand and machine moldings can be done by women, and they are specially clever at making core moldings. It has even been noticed that women produce twice as many

shell castings as men could do in the same time. The manufacturing of larger core moldings can also be undertaken with good results by women, especially those which are turned out of clay, and of which a pattern is given, as this is a kind of work requiring very little physical strength, and the method of reproducing such molds is always much the same. Women are also able to make large and complicated sand cores. The manual dexterity which many of them already possess is invaluable for this kind of work, and they have a fine sense of touch. The output of unbaked cores made by machinery is larger in the case of women than in that of men 17 or 18 years of age.

The employment of women in sections is to be recommended, for the output is increased by the constant rivalry between such sections, and at the same time the training is simplified, and it is easier to decide which women are not fit for the work and to reject them.

Women have been employed for cleaning castings with emery wheels or sand-blast apparatus, but it has been rather difficult to find women who were really fitted for this work. Only very few are able to stand the vibrations when working on emery wheels, or the noise and dust when working the sand-blast apparatus.

In the pattern shop women are only fit for subordinate work, such as carrying, cleaning, and painting patterns. In the latter occupations they work very satisfactorily, especially in the case of wooden patterns of the larger sizes. Women can also be employed for driving cranes. The writer gives examples where women have performed duties requiring a certain technical skill, such as driving the power-hammer in a forging shop, attending to the electric switchboard, as engineers and firemen on locomotives, and attending to the automatic feed of boilers.

Regarding the question of wages it is rather difficult to adopt the principle used in machinery shops, namely, paying women for piecework two-thirds of a man's wages. Work changes constantly in foundries, and a casting which is made to-day by a man may be made to-morrow by a woman. To avoid difficulties which most likely would arise if one and the same kind of work was paid for on a different scale, it has been thought better to pay women at the same rate as men. One danger will always remain—that women will endeavor to get employment in the machine shops, a kind of work which they undoubtedly prefer, when higher wages are not offered them in foundries.

To keep women in foundries it is absolutely necessary to provide welfare arrangements, such as rest rooms and facilities for baths. Whenever possible arrangements must be made to allow women to attend to their household duties, as well as their work. For instance,

women who have a large number of children ought to be allowed to take home from the canteen or factory kitchen the necessary meals for their families, and to work without rest periods on Saturdays, so as to cease work earlier and be able to perform their household duties.

All the above statements with respect to the results obtained by employing women in foundries are absolutely confirmed by those as to the employment of women in machine shops given in the monthly magazine (May, 1917) of the technical board of the German Engineers' Association of the district of Berlin. From this it appears that women are not only able to turn out bulk articles with the help of special machines, but that they are also able to work on ordinary machines, such as turning lathes, and this for the production even of parts of the most accurate dimensions. They are able also to work at the vise. Prof. Schlesinger states, for instance, that women learn filing after a brief period of practice, and that, where the subdivision of the operations in bulk manufacture is skillfully carried out, there is screw vise work which they can perform to-day for which six months ago the most highly skilled filers or mechanics were considered necessary. Women have even succeeded in undertaking work which previously was reserved for specially intelligent men.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

TRADE AGREEMENTS IN THE WOMEN'S CLOTHING INDUSTRIES OF BOSTON.[1]

BY BORIS EMMET, PH. D.

The increase in the strategic power of the women's garment workers' labor organizations is attested by the gradual disappearance from the trade agreements of the preferential union shop and its replacement by the stricter form of recognition known as the union shop. The new mode of union recognition is, for all practical purposes, the equivalent of what is known as the closed shop.[2]

The initial development, some years ago, of collective bargaining in the garment trades resulted in the appearance of a then rather novel form of trade-union recognition which became known as the preferential union shop.[3] Under its provisions members of the garment-workers' union were to be accorded preference in employment and lay-off. In this respect the preferential union shop differs radically from the open shop, under which no preference of any sort is accorded, as well as from the closed shop, which ordinarily specifies that none but union applicants, furnished upon request by the union, are to be employed. The peculiar character of the preferential system is further revealed by its provisions dealing with the employment of nonunion workers. These provisions permit the employment of nonunion workers, provided their skill is greater than that of union applicants for similar positions. When hired, nonunion workers are not to be discriminated against in matters of hours and pay. The preferential principle, however, makes it imperative that nonunion workers be hired last and laid off first. This fact constitutes a great disadvantage to the nonunion worker for the reason that the strong seasonal character of the garment trades necessitates very frequent lay-offs and subsequent new hirings.

The preferential union shop was invented and first applied in the garment trades and is characteristic of the modes of collective bar-

[1] Similar accounts dealing with the workings of trade agreements in the women's clothing industries of New York City, Philadelphia, Chicago, Cincinnati, and St. Louis were published, respectively, in the December, 1917, and January, February, and March, 1918, issues of the MONTHLY REVIEW.

[2] The union shop is a form of recognition under which only members of the union in good standing are to be employed as long as the union is in a position to furnish all the needed help. In the absence of union workers nonunion applicants may be hired, provided such applicants are willing to join the union immediately.

[3] Detailed descriptions of the nature of the preferential union shop are given on p. 215, Bul. 98, and pages 36 and 37, Bul. 145, of this bureau.

gaining into which it was incorporated. With a very few minor exceptions, none of the great international unions affiliated with the American Federation of Labor ever favored this form of union recognition.

Two reasons may be said to have accounted for the absence of the closed shop, or, rather the presence of the preferential union system, in the early collective agreements of the garment trades. Briefly, these causes were: (*a*) The racial composition and foreign character of the workers, and (*b*) the weakness of the then existing garment workers' organization. The second cause, although more important than the first, was the logical result of the first.

The majority of the garment workers, which, up to 1915, consisted of newly arrived immigrants with radical and socialistic leanings, has not, until recently, exhibited any great liking for the closed shop which, if strictly applied, would have prevented many of their newly arriving relatives and compatriots from securing employment in the needle trades. In any endeavor to arrive at the causes of the emergence of the preferential union shop, the fact that the old-time garment workers were strong socialists, but weak trade-unionists, must not be forgotten. The final formulation of the essentials of the preferential union shop was due, however, in a far greater measure, to the influence of outside arbitrators who endeavored to adjust the difficulties which arose, by "splitting the difference" between complete union recognition as represented by the closed shop and no recognition at all as practiced under open-shop policies. The fact that an outside influence determined, to a great extent, the mode of recognition accorded to the union may be said to have demonstrated a lack of power on the part of the organized workers.

Until very recently, the International Ladies' Garment Workers' Union did not possess the strength and vigor of most of the other great international labor organizations of the country. The cause responsible for this lack of "punching" power of the garment workers' union was its inability to control the labor supply of the trade because of the constant inflow of new immigrants, each of whom was a potential competitor for a needle-trade position. This cause was, to a very great extent, removed when the great tide of foreign immigration was for a while interrupted, and then materially diminished, by the War. The relatively greater scarcity of labor which ensued brought with it a possibility of effective organization of garment-trade labor. The new situation was immediately taken advantage of by the International Ladies' Garment Workers' Union, which abandoned the preferential principle for the stricter mode of recognition provided by the union shop. The new demand was, in the great majority of instances, granted by the employers. We thus find

the union shop taking the place of the preferential system in many of the women's garment-trade centers of the country, notably in some of the trades of New York City and in all similar trades of Philadelphia, Chicago, Cincinnati, St. Louis, and Boston.

The recent development of the collective-bargaining schemes in existence in the women's garment industries of Boston furnishes an interesting illustration of this tendency toward stricter union recognition. With a very few unimportant exceptions, all the garment-trade agreements in operation at the present time in Boston have abandoned the preferential system for the union shop.

CLOAK AND SUIT INDUSTRY.

A general strike called in the cloak and suit industry of Boston, in the early part of 1913, resulted in the formation of an association of employers, the principal purpose of which was to devise ways and means to meet the demands of their organized employees. While the strike was in progress, a committee of the newly formed Boston Ladies' Garment Manufacturers' Association was sent to New York City to investigate and report upon the workings of the so-called Protocol of Peace—a trade agreement which had been operating in the cloak and suit industry of New York City since September 2, 1910. The committee was favorably impressed with the results of the New York agreement and recommended the trying out of a similar agreement in the Boston industry. In accordance with this recommendation, a trade agreement, for an indefinite period, was signed on March 8, 1913, between the Boston Ladies' Garment Manufacturers' Association and the International Ladies' Garment Workers' Union, the latter representing Cloak and Suit Operators' Union No. 56, Pressers' No. 12, and Cutters' No. 73.

The agreement of March 8 accorded preference in employment and lay-off to members of the union and abridged materially the traditional right of the employer to discharge his help. It contained also provisions for : (1) Abolition of home work, subcontracting, and "team work" or inside contracting; (2) minimum weekly rates of wages;[1] (3) equal distribution of work; (4) employees' price committee for collective piece-rate making; (5) a 50-hour week; (6) prohibition of overtime work on Saturdays; (7) payment to week workers of time and one-half for overtime work; (8) a board of grievances based upon the principle of conciliation; (9) a board of arbitration; (10) a joint board of sanitary control for the formulation and enforcement of sanitary standards.[2]

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[1] The wage rates specified are shown in footnote table on page 229.

[2] The organization of this board and its powers and functions were to be similar to those of the joint board of sanitary control of the cloak, suit, and skirt industry of New York City, as described on p. 254, Bul. 98, of this bureau. The Boston board, however, was never formed.

An account of the workings of this agreement during the first year of its existence was published by the Bureau of Labor Statistics on April 10, 1914.[1] It was then stated that the agreement worked satisfactorily, that the adjustment agencies functioned properly, and, furthermore, that the existence of the agreement contributed greatly to the formation of a better understanding between employer and employee.

The agreement of March 8, 1913, was revised on August 31, 1915. The revision resulted in the following modifications of the original agreement: (1) Greater freedom of employer to discharge for poor workmanship and misbehavior; (2) provision that all decisions of the adjustment agencies be carried out in 14 days; (3) greater freedom of employer in the assignment of work within the shop; (4) two sets of increases in wage rates, one effective immediately and the other on August 1, 1916;[2] (5) provision for an investigation of the trade for the purpose of establishing minimum hourly rates for pieceworkers; (6) restriction of overtime to eight hours per week; (7) the payment to week workers for Labor Day; (8) organization of a board of three presided over by an impartial chairman, for the purpose of enforcing the provisions of the agreement and to recommend changes and improvements; (9) provision that disputes upon which the board of grievances, as originally constituted on March 8, 1913, could not agree, were to be submitted to arbitration; (10) regulation of apprenticeships in the cutting and pressing branches of the trade.[3]

An analysis of the principal innovations which were brought about by the revision throws considerable light on the difficulties which were encountered as the result of the original agreement. In brief, these difficulties were as follows: (1) The right of the employer to discharge was so limited that it actually prevented him from ridding himself of incompetents and objectionables; (2) the inability of the

[1] Bul. 145, pp. 141–146.

[2] The wage rates specified are shown in footnote table on page 229.

[3] The agreement permitted employers to hire apprentices for the cutting and pressing departments in the ratio of one for every five full-fledged cutters or pressers employed. The length of the apprenticeship periods in each of the trades was to be three years. Apprentices were to receive the following minimum weekly rates of pay:

Wage rates of apprentices.

Period	Minimum weekly rates of—	
	Cutting.	Pressing.
First six months	$8	$9
Second six months	11	12
Third six months	14	15
Fourth six months	17	18
Fifth six months	21	20
Sixth six months	24	22

parties to force the members to carry out quickly decisions made by the adjustment agencies; (3) the inability of employer to select the most skilled employees for jobs requiring expert knowledge, due to the provision of the agreement for equal distribution of work among all employees; (4) the absence of a permanent and impartial body to formulate standards and study their results; (5) frequent failures on the part of the board of grievances to agree upon the adjustment of complaints.

The agreement, as revised and supplemented on August 31, 1915, worked satisfactorily for a short time. By the end of the year, however, shop strikes became so frequent that the employers began to complain that the benefit of strikeless shops—one of the aims of the agreement—became nonexistent. To prove this contention representatives of the manufacturers' association produced evidence which showed that during the past year not less than 19 strikes, lasting each from half a day to as long a period as 10 days, took place. Incidentally, the employers charged the union with opposition to the introduction of labor-saving machinery and with interference in the management of the shops.

In answer to these charges officials of the union stated that they did not interfere with the management of the shops, but "merely assumed the right to instruct workers not to make work on a different system than that which prevailed formerly," unless mutually agreed to. As regards the complaint of opposition to labor-saving machinery the union suggested that the installing of such machinery "be restricted so that the workers may be able to find employment," to which effect "steam-pressing machines should be restricted to one machine to each 10 pressers, with a further proviso that in dull seasons all steam machine pressing shall be dispensed with until all hand pressers are fully employed."

No compromises were reached as a result of the joint conferences at which the mentioned difficulties were discussed. The controversy dragged on during the remainder of the year 1916 without any statement from either of the sides as to the irreducible minimum of conditions which it would consider as acceptable

On January 9, 1917, the president of the International Ladies' Garment Workers' Union addressed to the Boston Ladies' Garment Manufacturers' Association a letter containing an enumeration of standards which would be acceptable to the union. The letter specified the following: (1) A 48-hour week; (2) double pay for overtime; (3) restriction of overtime to eight hours per week, and permissible only during the busy seasons; (4) payment to week workers for six legal holidays; (5) an increase of $1 per week on February 1, 1917, to

all week workers; (6) organization of a board of price adjusters for the settlement of piece-rate disputes; (7) a minimum hourly rate of 75 cents for operators and piece tailors and 50 cents for finishers; (8) a strict union shop; (9) submission to arbitration of all disputes upon the adjustment of which the parties are unable to agree; (10) pending the adjustment of such disputes within a limit of 24 hours no strikes or lockouts to take place; (11) the agreement to be in force for one year.

The enumerated union demands were met on January 16, 1917, by counterproposals from the employers' association. Briefly, these proposals were as follows: (1) Readiness to grant a 48-hour week, provided all other competitive markets introduced a similar week; (2) 10 hours of overtime as against the eight hours desired by the union; (3) time and one-half for overtime work instead of double time; (4) no pay for legal holidays; (5) no increases in weekly rates; (6) acceptance of the suggested price-adjustment scheme; (7) granting of the requested minimum hourly rates for operators or piece tailors and finishers; (8) rejection of the union shop, and retention of the preferential union shop.

These counterproposals were not satisfactory to the union. In a letter dated February 20, 1917, and addressed to the officers of the Boston Ladies' Garment Manufacturers' Association, the president of the International Ladies' Garment Workers' Union declared that the counterproposals of the employers were unacceptable, and suggested the assembling of another joint conference. This suggestion, however, came too late, for on February 28, 1917, the Boston Ladies' Garment Manufacturers' Association was disbanded.

No relaxation of standards took place during the year 1916 while the above controversies and conferences were in progress. As a matter of fact, the interests of the workers were in no way injured by the absence of a formal settlement. The European War with its curtailment of immigration has greatly strengthened the position of the union and enabled it actually to introduce standards of work and pay equivalent to, and in a number of establishments even better than, those formally specified by their international officers.

Since February 28, 1917, no written trade agreements have been in operation in the cloak and suit industry of Boston. The trade, however, is completely unionized, each of the establishments having an understanding with the union to maintain the following standards: (1) Strict union shop; (2) a 49-hour week; (3) eight hours of overtime per week, permissible only during the busy seasons; (4) time and one-half for overtime; (5) minimum weekly and hourly rates of

wages;[1] (6) the presence in each establishment of a shop chairman and price committee, the first to represent the employees in their dealings with the employer, the second to participate in collective piece-rate making; (7) one legal holiday with pay to week workers; (8) equal distribution of work; (9) peaceful adjustment of grievances by the parties themselves, and when unable to agree, by an arbitrator.

No provision regulating apprenticeships is in force at the present time, for the reason, stated by the union, that none of the employers in the cloak and suit industry of Boston employ at the present time five full-fledged cutters or pressers.

Interviews with employers reveal the fact that the existing oral trade agreements work satisfactorily, that the present union leadership is so businesslike and efficient that chances for the revival of the Garment Manufacturers' Association are small. Satisfaction with the present status of collective bargaining is also expressed by the leaders of the workers, who point with pride to the fact that since the disbanding of the manufacturers' association only one strike of significance has taken place in the trade. As a rule, all arising grievances are quickly and peacefully adjusted. The union records show that in the course of the year 1917, 239 disputes were adjusted peacefully and quickly, without any recourse to the assistance of arbitrators. The adjusted disputes specified the following grievances: Discharges, 76; miscellaneous, 65; unequal division of work, 35; sending work to outside shops, 24; payment under scale, 23; piece-rate disagreements, 16.

Oral trade agreements of the character outlined above govern at the present time the relations of employer and employee in every

[1] The following table gives the rates of wages in the cloak and suit industry, since Mar. 8, 1913:

Minimum rates of wages in the cloak and suit industry of Boston since 1913.

Occupation.	Minimum rates in effect on—			
	Mar. 8, 1913.	Aug. 31, 1915.	Aug. 1, 1916.	Feb. 28, 1917.
Week workers, per week:				
Cutters, cloaks and suits	$24.00	$25.50	$27.00	$31.00
Cutters, skirts	24.00	25.00	25.00	27.00
Cutters, trimmings	18.00	20.00	21.00	27.00
Pressers, upper, coats	24.00	25.50	27.00	31.00
Pressers, under, coats	19.00	20.50	22.00	25.00
Pressers, upper, skirts	22.00	23.00	24.00	27.00
Pressers, under, skirts	17.00	19.00	20.00	23.00
Sample makers, coats	24.00	25.00	25.00	27.00
Sample makers, skirts	22.00	23.00	23.00	25.00
Button sewers	(a)	(a)	(a)	14.00
Pieceworkers, per hour:				
Operators, cloaks	(a)	(a)	(a)	.90
Operators, skirts	(a)	(a)	(a)	.75
Cloak finishers	(a)	(a)	(a)	.65

a None.

known cloak and suit establishment of the city of Boston, 68 in number, with a total of about 1,500 employees.

DRESS AND WAIST INDUSTRY.

The circumstances under which the first important trade agreement came about in the dress and waist industry of Boston were strikingly similar to those which preceded the signing of a similar agreement in the cloak and suit industry, as already described.

A strike was called in the dress and waist industry in the early part of 1913, for the purpose of compelling union recognition and collective bargaining. To counteract the activities of their employees, the dress and waist employers immediately organized themselves into the Boston Dress and Waist Manufacturers' Association. The principal aim of the new association, as announced in the public press, was to combat what the employers considered to be unjust and unreasonable demands. Shortly thereafter, however, through the efforts of the same public-spirited citizens who aided in the settlement of the cloak and suit strike, a conference of the opposing parties took place. This conference finally resulted in the signing of an agreement on March 15, 1913.

The parties to this agreement were the Boston Dress and Waist Manufacturers' Association and the International Ladies' Garment Workers' Union, the latter representing its subordinate locals, Nos. 56, 12, 73, and 49. In general, the agreement signed was similar to the one in the cloak and suit industry of Boston signed one week before. It contained the following: (1) A provision not to discharge workers for union activity; (2) prohibition of home work, subcontracting, and "team work" or inside contracting; (3) minimum weekly rates of wages for cutters and pressers, and a general minimum weekly rate for all beginners;[1] (4) equal distribution of work; (5) organization of piece-rate committees of employees for collective rate making; (6) presence in each establishment of a shop chairman to represent the employees in their dealings with the firm; (7) a 50-hour week; (8) limitation of overtime to not more than six hours per week for cutters and pressers, and to not more than four hours per week for all other workers; (9) the payment of time and one-half for overtime work to week workers; (10) preferential union shop; (11) a joint board of sanitary control with a constitution, powers, and functions identical to those of a similar organization in operation in the dress and waist industry of New York under the so-called Protocol of Peace of January 18, 1913;[2] (12) boards of arbitration and of

[1] The wage rates specified are shown in footnote table on page 232.

[2] The nature and functions of the joint board of sanitary control in operation in the dress and waist industry of New York City were described in detail on pp. 109–111, Bul. 145, of this bureau. The Boston board, however, was never organized.

grievances with constitutions and functions analogous to those of the boards of arbitration and grievances under the Boston cloak and suit agreement of March 8, 1913; (13) prohibition of strikes and lockouts.

In spite of the favorable auspices under which it was launched, the above-outlined agreement never achieved any great degree of success in the elimination of strikes from the industry. An impotent organization on the part of the employers, powerless to force some of its members to live up to the agreement, and a very inefficient and unbusinesslike union leadership, unable to control the actions of the rank and file, may be said to have accounted for the lack of success of the agreement.

The nature of some of the other shortcomings of this agreement may be easily judged from the changes made in it, when, as a result of joint conferences, it was modified on February 9, 1916. The revision introduced the following changes in conditions: (1) A 50-hour week during the months of December to May, inclusive, and a 49-hour week during the remainder of the year;[1] (2) limitation of overtime to four hours per week for women and eight hours for men; (3) establishment of minimum weekly wage rates for the majority of the occupations in the trade;[2] (4) appointment of price adjusters for the settling of piece-rate disputes; (5) establishment of a so-called joint board of control of three, presided over by an impartial person, an organization similar to the joint board of sanitary control, referred to above, but with an extended jurisdiction which was to include wage matters; (7) substitution of the strict union shop for the preferential union shop; (8) appointment of an impartial chairman to adjust complaints upon the disposition of which the parties concerned could not agree.

The changes and modifications made on February 9, 1916, resulted in bringing about law and order in the industry and in developing better relations between the employers and employees.

One year later, in February, 1917, the union presented new demands to the manufacturers' association. These demands, like the counterproposals of the employers, were referred for final adjudication to the chairman of the board of control of the industry, acting as arbitrator. The decisions made by this arbitrator were accepted by both sides and resulted in a further modification of the original agreement as already revised on February 9, 1916.

The union demands, the counterdemands of the employers which they evoked, and the final adjustments made by the arbitrator, are interesting and instructive because they throw light on the char-

[1] A 49-hour week was granted to the employees in June, 1917. Beginning with May 1, 1918, the weekly hours of labor, in accordance with a decision of the arbitrator, will be reduced to 48.

[2] The wage rates specified are shown in footnote table on page 232.

acter of the difficulties which arose. The union demands were three in number. The first had for its object the granting of permission to union officials to visit the shops to ascertain if the provisions of the agreement relating to union recognition were observed. This demand was refused by the arbitrator. The second demand aimed at a further limitation of overtime work. The wishes of the union in this respect were partially agreed to. The third request, which demanded certain wage increases, was also partially granted by the arbitrator.[1] The counterdemands of the employers specified: (1) The granting of permission to discharge help without review—denied by the arbitrator; (2) the putting of their finishing departments on a piecework basis—granted on the condition that the piece rates to be put into effect should be agreed upon in advance by the chief clerks of the union and the association; (3) requirement that pieceworkers register the time of their arrival and departure—conceded by the arbitrator; (4) the right to employ cutting apprentices in the ratio of one to each two or more of full-fledged cutters employed. The decision of the arbitrator allowed one apprentice cutter for every three full-fledged mechanics employed.

The most recent changes in the trade agreement governing the dress and waist industry of Boston came about as a result of new union demands presented in the early part of 1918. These related principally to increases in wage rates and were, to a great extent, granted.[2]

[1] The wage rates specified are shown in footnote table below.

[2] The following table shows the rates of wages in operation in the Boston dress and waist industry since March 15, 1913:

Minimum rates of wages in the dress and waist industry of Boston since 1913.

Occupation.	Minimum rates in effect on—			
	Mar. 15, 1913.	Feb. 9, 1916.	Mar. 21, 1917.	Feb. 9, 1918.
Week workers, per week:				
Cutters	$24.00	$25.00	$25.00	$28.00
Pressers	20.00	22.00	22.00	24.50
Sample makers, skirts	None.	22.00	22.00	24.[illegible]
Sample makers, dresses	None.	12.00	14.00	16.[illegible]
Under pressers	$16.00	18.00	18.00	20.50
Operators, dresses	None.	12.00	13.20	15.00
Operators, waists	None.	12.00	14.00	16.00
Drapers	None.	12.00	13.20	15.00
Trimming and pinning	None.	10.00	11.00	12.50
Trimming	None.	9.00	10.00	11.50
Ironing	None.	9.00	11.00	12.50
Buttonhole making	None.	9.00	10.00	11.50
Finishing	None.	7.00	8.75	10.00
Examining	None.	7.00	8.75	10.00
All learners	$6.00	6.00	6.00	6.00
Pieceworkers, per hour:				
Operators	None.	.33	.33	.38

In addition to the trade agreement with the Dress and Waist Manufacturers' Association of Boston, which has a membership of 22 firms who employ about 1,500 workers, the Waist Makers' Union of Boston has at the present time 16 establishment trade agreements with as many firms, employing a total of about 300. The terms of these agreements are very similar to those of the existing agreement with the Dress and Waist Manufacturers' Association.

PETTICOAT INDUSTRY.

In the city of Boston are located about half a score of establishments which specialize in the manufacture of petticoats. This industry, more than any other of the allied needle trades, utilizes a high subdivision of labor in its manufacturing processes, a fact which enables petticoat employers to employ exclusively unskilled help.

None of the petticoat workers were organized prior to 1917. The absence of collective action on the part of the employees was responsible, it is said, for the unsatisfactory labor conditions and low wages then in existence. Recently, however, the local Dress and Waist Makers' Union succeeded in organizing a considerable part of the petticoat trade. As a result, trade agreements were entered into by the union and three of the largest petticoat firms, employing a total of about 200 workers. The terms of these agreements are very similar to those of the agreements in operation in the dress and waist industry of the city, with the exception of wage rates, which are lower because of the unskilled labor employed in the petticoat shops. The application of collective bargaining methods resulted nevertheless in a 15 per cent increase in the earning capacity of the petticoat workers.

WATERPROOF GARMENT INDUSTRY.

Two distinct groups of employers exist in the waterproof garment industry of Boston. One of these embraces principally small employers who still cling to antiquated manufacturing methods, use little machinery and no subdivision of labor. Such employers depend wholly upon the services of skilled raincoat makers. This portion of the industry confines its activity to the making of raincoats. It includes about 30 small firms with a total employed of about 500. The other group contains large firms employing more modern production methods—an extensive use of machinery and elaborate systems of subdivision of labor. Employers of this group have succeeded almost altogether in doing without the services of skilled workers.

The extent of unionism in the industry appears to vary with the manufacturing methods. The more modern and larger shops having, as a rule, dispensed with the services of skilled raincoat makers,

employ almost exclusively unskilled female workers. No collective bargaining of any kind or unionism is to be found in such establishments. The manufacturing methods of the smaller shops make production contingent upon the services of skilled raincoat makers, such as old-line cutters, stitchers, and cementers. These workers are all organized and all establishments which employ them operate under trade agreements with the union.

The skilled waterproof garment workers of Boston are organized as Local No. 7 of the International Ladies' Garment Workers' Union. This local has at the present time 27 trade agreements with as many firms, having a total employed of about 500. All of these agreements run for one year and provide for the following: (1) A preferential union shop for establishments manufacturing civilian garments, and a strict union shop for those manufacturing military garments; (2) a 48-hour week; (3) equal division of work; (4) minimum weekly and piece wage rates; (5) peaceful adjustment of grievances with a proviso that complaints upon the disposition of which no agreement can be reached, are to be submitted to arbitration.

JOINT COUNCILS OF EMPLOYERS AND EMPLOYEES ADOPTED BY POTTERY INDUSTRY IN GREAT BRITAIN.

The pottery industry of Great Britain is the first industry to give effect to the recommendations of the Whitley report[1] for the establishment of joint standing industrial councils, composed of representatives of employers and employees. The following description of the first meeting of the pottery council on January 11, 1917, is taken from the Manchester (England) Guardian of January 12. There is added to this description a statement of the objects of the council, as given in The Labor Gazette for February, 1918.

POTTERY TRADE FIRST IN FIELD.

The pottery trade is the first to appoint a joint standing industrial council on the lines of the report of the Whitley committee to the reconstruction committee, and at its first meeting, which was held in Stoke to-day, this council had the advantage of the presence of the Minister of Reconstruction (Dr. Addison) and the Minister of Labor (Mr. G. H. Roberts).

In appealing for the formation of such councils in every industry, the Government held out the inducement that they would be regarded as "the official standing consultative committees to the Government on all future questions affecting the industries they represent," and as "the normal channel through which the opinion and experience of an industry will be sought." Mr. Roberts has added the promise that by their means it will be possible also to allow a larger degree of self-government in industry than exists at present; and in his address to the council yesterday Dr. Addison showed in detail how very useful they will be in assisting the Government in vitally important problems of reconstruction after the war, such as the introduction

[1] This report is published in Bulletin 237 of the Bureau of Labor Statistics.

of improved methods of manufacture, the rationing of raw materials wherever there is a shortage, and the giving of priority of consideration to those things which will be needed first.

WHITLEY SUGGESTIONS ADOPTED.

The Whitley committee refrained from drawing up a cut-and-dried scheme for general application to all industries, but made a number of suggestions, and, substantially, these have been incorporated in the objects set out by the new national council of the pottery industry. They include the bringing of all manufacturers and operatives into their respective associations, the "regular" consideration of earnings and the establishment and maintenance of equitable conditions throughout the industry, the maintenance of selling prices that will afford reasonable remuneration to employers and employed, the settlement of all kinds of disputes, the removal of all dangers to health from the industry; the study of processes, encouragement of research, and the full utilization of their results; the utilization, under adequate safeguards, of inventions and improvements designed by workpeople, education in all branches of the industry, the publication of reports on problems of the industry, and, generally, "the advancement of the pottery industry and of all connected with it by the association in its government of all engaged in the industry."

Dr. Addison expressed some disappointment yesterday at the slowness of other trades in forming industrial councils. But it was probable, he said, that the pottery council would still be in process of formation had not employers and workpeople begun to move in the matter months before the Whitley committee made its report.

Maj. Frank H. Wedgwood, who presided at the meeting, gave as two reasons for this the great concentration of the industry in the Stoke district and the fact that in the pottery trade nearly all the factories are on a small scale, with the result that employers and workers are brought into closer personal contact with one another. All sections of the industry in the United Kingdom are included, excepting the coarser makes of stoneware, such as flooring and roofing tiles. The number of employers is given as between 400 and 500, and the number of workers as about 50,000.

CONSTITUTION OF THE COUNCIL.

The council consists of 30 representatives of employers and an equal number of operatives. Under the constitution the employers' representatives may include "salaried managers," and those of the operatives "some women." One-third are to retire annually, but may be reappointed. The council may appoint an independent chairman, but yesterday it elected Maj. Wedgwood, managing director of the well known firm of Josiah Wedgwood, and appointed Mr. S. Clowes, one of the operatives' organizers, vice chairman. In time district committees and works committees will probably be appointed, but on all such bodies the representation of manufacturers and workers is to be equal. On the same principle the secretarial duties are divided between Mr. Arthur P. Llewellyn, of Tunstall, and Mr. Arthur Hollins, of Hanley.

It is noteworthy that, at a meeting at which there were as many employers present as operatives, general acclamation was given to such remarks by Dr. Addison as that every employer should be in an employers' association and every workman in a trade union; that labor must be assured of a fair proportion of the reward arising out of the introduction of improved methods of manufacture; and that there must be no "unholy alliance between capital and labor at the expense of the consumer."

OBJECTS OF THE COUNCIL.[1]

The advancement of the pottery industry and of all connected with it by the association in its government of all engaged in the industry.

[1] The Labour Gazette, London, February, 1918, p. 49.

It will be open to the council to take any action that falls within the scope of its general object. Its chief work will, however, fall under the following heads:

(*a*) The consideration of means whereby all manufacturers and operatives shall be brought within their respective associations.

(*b*) Regular consideration of wages, piecework prices, and conditions, with a view to establishing and maintaining equitable conditions throughout the industry.

(*c*) To assist the respective associations in the maintenance of such selling prices as will afford a reasonable remuneration to both employers and employed.

(*d*) The consideration and settlement of all disputes between different parties in the industry which it may not have been possible to settle by the existing machinery, and the establishment of machinery for dealing with disputes where adequate machinery does not exist.

(*e*) The regularization of production and employment as a means of insuring to the workpeople the greatest possible security of earnings.

(*f*) Improvement in conditions with a view to removing all danger to health in the industry.

(*g*) The study of processes, the encouragement of research, and the full utilization of their results.

(*h*) The provision of facilities for the full consideration and utilization of inventions and improvements designed by workpeople and for the adequate safeguarding of the rights of the designers of such improvements.

(*i*) Education in all its branches for the industry.

(*j*) The collection of full statistics on wages, making and selling prices, and average percentages of profits on turnover, and on materials, markets, costs, etc., and the study and promotion of scientific and practical systems of costing to this end.

All statistics shall, where necessary, be verified by chartered accountants, who shall make a statutory declaration as to secrecy prior to any investigation, and no particulars of individual firms or operatives shall be disclosed to any one.

(*k*) Inquiries into problems of the industry, and where desirable, the publication of reports.

(*l*) Representation of the needs and opinions of the industry to Government authorities, central and local, and to the community generally.

EMPLOYMENT AND UNEMPLOYMENT.

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of February, 1918, and in cases where figures are available, for the corresponding month in 1917. Figures are given from 151 public employment offices in 38 States and the District of Columbia, Federal employment offices in 26 States and the District of Columbia, Federal-State employment offices in six States, a Federal-State-county-municipal employment office in one State, a Federal-municipal employment office in one State, State employment offices in 16 States, a State-county-municipal employment office in one State, State-municipal employment offices in three States, municipal employment offices in six States, and a municipal-private employment office in one State. Figures from two Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Alabama.												
Mobile (Federal)	(1)	8	(1)	234	[2] 15	[2] 181	(1)	(1)	(1)	117	(1)	67
Arkansas.												
Little Rock (State)	.....	87	.....	1,776	.....	[2] 1,108	.....	(1)	.....	835	.....	822
California.												
Fresno (State)	.....	442	.....	774	.....	529	.....	(1)	.....	769	.....	639
Los Angeles (State-municipal)	2,255	3,127	3,599	4,277	1,950	2,659	(1)	(1)	3,462	4,147	2,874	3,402
Oakland (State)	581	1,012	697	1,516	419	870	285	(1)	687	1,513	521	1,[illegible]
Sacramento (State)	211	236	471	647	392	422	137	(1)	392	619	347	519
San Francisco (Federal) [3]	385	155	496	640	[2] 760	[2] 752	(1)	(1)	487	475	323	303
San Francisco (State)	1,106	1,627	2,121	2,994	1,718	[2] 2,831	636	(1)	2,045	3,290	1,259	2,159
Total	.....	.....	.....	.....	.....	.....	.....	.....	7,073	10,813	5,324	8,187
Colorado.												
Colorado Springs (State)	383	397	383	397	[2] 519	[2] 439	(1)	(1)	519	389	343	389
Denver (Federal)	17	23	17	180	[2] 102	[2] 750	(1)	(1)	35	230	15	115
Denver No. 1 (State)	50	283	50	283	[2] 150	[2] 1,249	(1)	(1)	150	214	82	214
Denver No. 2 (State)	36	367	74	367	[2] 160	[2] 290	(1)	(1)	160	197	74	197
Pueblo (State)	189	370	189	370	[2] 261	[2] 402	(1)	(1)	261	347	184	347
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,125	1,377	698	1,262

[1] Not reported. [2] Number applying for work. [3] Figures for 1918 represent women's division only.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918—Contd.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Connecticut.												
Bridgeport (State)	554	(1)	(1)	540	(1)	[2] 639	(1)	(1)	(1)	(1)	493	438
Hartford (State)	636	(1)	(1)	616	(1)	[2] 769	(1)	(1)	(1)	(1)	470	555
New Haven (State)	711	(1)	(1)	614	(1)	[2] 722	(1)	(1)	(1)	(1)	598	542
Norwich (State)	192	(1)	(1)	210	(1)	[2] 246	(1)	(1)	(1)	(1)	180	198
Waterbury (State)	154	(1)	(1)	79	(1)	[2] 149	(1)	(1)	(1)	(1)	123	59
Total									(1)	(1)	1,864	1,792
Delaware.												
Wilmington (Federal)	19	3	(1)	1,500	[2] 154	[3] 1,410	(1)	(1)	174	1,346	148	1,290
District of Columbia.												
Washington (Federal)		285		1,818		[3] 1,679		(1)		2,682		2,398
Florida.												
Jacksonville (Federal)	1	8	1	904	[2] 11	[2] 620	(1)	(1)	1	499	1	474
Miami (Federal)	1	3	2	4	[2] 34	[2] 29	(1)	(1)	2	5	2	1
Tampa (Federal)		1		300		[2] 213		(1)		200		200
Total									3	704	3	675
Georgia.												
Atlanta (Federal-State)		74		1,405		[2] 470		(1)		331		300
Savannah (Federal)	2	7	6	250	[2] 17	[2] 125	(1)	(1)	4	25	4	12
Total									4	356	4	312
Idaho.												
Moscow (Federal)	3	20	3	200	[2] 16	[2] 63	(1)	(1)	3	51	3	51
Illinois.												
Chicago (Federal)	522	1,422	2,977	6,735	[2] 2,557	[2] 7,283	(1)	(1)	2,392	7,260	2,136	5,853
Chicago (State)	3,448	2,700	11,644	7,652	11,158	5,367	1,018	3,992	11,993	8,515	9,048	6,668
East St. Louis (State)	466	625	871	1,025	348	302	457	482	788	789	725	769
Peoria (State)	592	660	733	944	118	149	574	699	655	833	650	827
Rock Island-Moline (State)	289	761	552	2,523	288	876	224	946	366	1,759	80	1,680
Rockford (State)	419	452	693	951	418	670	193	227	512	665	455	615
Springfield (State)	250	404	311	529	153	261	187	475	282	498	262	399
Total									16,988	20,319	13,356	16,809
Indiana.												
Evansville (State)	202	157	238	221	117	(1)	19	(1)	296	221	238	[illegible]
Fort Wayne (State)	331	402	547	632	161	(1)	306	(1)	517	606	467	[illegible]
Indianapolis (Federal)	190	105	355	607	[2] 620	[2] 770	(1)	(1)	351	52[illegible]	278	[illegible]
Indianapolis (State)	704	635	704	569	705	603	30	32	672	635	643	[illegible]
South Bend (State)	125	126	713	215	379	200	30	109	350	250	282	[illegible]
Terre Haute (State)	150	91	273	360	[2] 283	273	(1)	68	283	336	263	[illegible]
Total									2,469	2,572	2,171	2,[illegible]
Iowa.												
Des Moines (Federal-State)[3]	70	48	123	111	97	94	19	10	103	90	25	37
Kansas.												
Topeka (State)	95	210	110	231	130	189	5	3	101	176	90	162

[1] Not reported. [2] Number applying for work. [3] State office prior to October, 1917.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918—Contd.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Kentucky.												
Louisville (State)	110	111	110	98	[1] 219	[1] 148	(2)	(2)	110	98	110	98
Louisville (municipal-private)	.....	255	333	451	430	274	698	357	358	370	141	198
Total	.....	.....	.....	.....	.....	.....	.....	.....	468	468	251	296
Louisiana												
New Orleans (Federal-State)	61	77	120	683	[1] 320	[1] 326	(2)	(2)	315	829	(2)	550
Maine.												
Portland (Federal)	.....	2	.....	4	.....	[1] 50	.....	(2)	.....	50	.....	50
Maryland.												
Baltimore (Federal)	106	304	629	4,508	[1] 319	[1] 7,582	(2)	(2)	174	3,712	174	1,254
Massachusetts.												
Boston (Federal)	5	224	157	3,864	[1] 48	[1] 4,930	(2)	(2)	5	2,889	5	1,462
Boston (State)	1,434	1,199	1,673	1,428	849	[1] 1,086	(2)	(2)	[3] 2,541	[3] 2,405	1,154	1,039
Springfield (State)	661	459	930	627	267	202	(2)	(2)	[3] 973	[3] 724	681	509
Worcester (State)	745	700	930	881	431	[1] 541	(2)	(2)	[3] 1,145	[3] 1,152	619	514
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,664	7,170	2,439	3,524
Michigan.												
Battle Creek (State)	30	80	96	332	[1] 70	[1] 332	(2)	(2)	63	332	63	332
Bay City (State)	33	18	110	90	[1] 128	137	(2)	28	79	108	76	104
Detroit (Federal)	92	77	373	894	[1] 323	[1] 1,542	(2)	(2)	323	914	323	873
Detroit (State)	297	1,817	540	3,221	[1] 538	3,044	(2)	177	514	3,221	514	3,193
Flint (State)	380	230	380	645	(2)	620	(2)	111	380	616	380	606
Grand Rapids (State)	300	291	3,083	801	[1] 3,007	884	(2)	146	3,007	826	3,007	710
Jackson (State)	328	242	516	351	[1] 540	279	(2)	138	512	451	506	341
Kalamazoo (State)	200	160	268	266	[1] 300	540	(2)	46	267	294	267	192
Lansing (State)	37	187	85	881	[1] 73	846	(2)	127	56	881	56	881
Muskegon (State)	52	18	119	345	[1] 132	162	(2)	16	117	126	100	126
Saginaw (State)	94	84	469	380	[1] 480	619	(2)	86	450	380	450	380
Total	.....	.....	.....	.....	.....	.....	.....	.....	5,768	8,019	5,742	7,738
Minnesota.												
Duluth (State)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	604	639
Minneapolis (Federal)	29	39	35	197	[1] 28	[1] 457	(2)	(2)	11	145	11	113
Minneapolis (State)	(2)	945	(2)	1,301	(2)	[1] 1,219	(2)	(2)	(2)	1,167	1,126	926
St. Paul (State)	(2)	(2)	(2)	364	(2)	(2)	(2)	(2)	(2)	361	627	361
Total	.....	.....	.....	.....	.....	.....	.....	.....	11	1,673	2,368	2,039
Mississippi.												
Gulfport (Federal)	(2)	3	(2)	190	[1] 68	[1] 144	(2)	(2)	(2)	103	(2)	91
Missouri.												
Kansas City (Federal-State)	484	535	923	2,212	[1] 807	[1] 2,721	(2)	(2)	834	1,967	674	1,785
St. Joseph (State)	(2)	993	798	1,479	[1] 734	[1] 816	(2)	(2)	(2)	816	727	514
St. Louis (Federal-State)	296	246	831	1,553	435	[1] 1,148	(2)	(2)	634	1,134	617	1,104
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,468	3,917	2,018	3,703

[1] Number applying for work. [2] Not reported. [3] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918—Contd.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Montana.												
Butte (municipal)	(1)	(1)	330	444	[2] 520	[2] 504	(1)	(1)	(1)	(1)	268	371
Nebraska.												
Lincoln (Federal-State)	.....	117	.....	135	.....	[2] 129	.....	(1)	.....	129	.....	114
Omaha (Federal-State-county-municipal)	466	672	663	1,230	[2] 786	645	(1)	252	721	897	579	836
Total	.....	.....	.....	.....	.....	.....	.....	.....	721	1,026	579	950
New Jersey.												
Jersey City (Federal-State)	41	72	608	838	[2] 611	[2] 836	(1)	(1)	487	396	431	331
Newark (Federal-State)	1,004	2,971	3,443	8,935	[2] 2,443	[2] 9,896	(1)	(1)	2,123	7,347	2,060	5,733
Orange (Federal-State)	179	472	473	805	[2] 319	[2] 790	(1)	(1)	246	481	195	268
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,856	8,224	2,686	6,332
New York.												
Albany (State)	407	493	501	807	415	681	326	306	645	922	368	544
Buffalo (Federal)	798	949	1,779	1,886	[2] 2,010	[2] 1,232	(1)	(1)	1,571	1,428	1,131	934
Buffalo (State)	815	946	1,795	1,786	1,284	846	165	186	1,571	1,428	1,131	934
New York City (Federal)[3]	2,392	.....	5,706	5,707	[2] 5,758	[2] 7,780	(1)	(1)	4,377	2,410	2,731	3,344
New York City (State)	(1)	2,183	(1)	3,031	(1)	1,725	(1)	1,043	(1)	3,039	(1)	1,624
New York City (municipal)	2,374	1,966	2,737	2,065	2,186	1,330	1,958	1,439	3,310	2,304	2,124	1,471
Rochester (State)	1,078	1,043	1,582	1,576	709	972	363	419	1,397	1,443	793	784
Syracuse (State	870	777	1,260	1,187	727	637	260	245	1,172	1,098	766	746
Total	.....	.....	.....	.....	.....	.....	.....	.....	14,043	14,072	9,044	10,381
Ohio.												
Akron (State-municipal)	(1)	(1)	1,860	1,818	735	900	1,682	2,259	1,545	1,563	1,298	1,324
Athens (State-municipal)	.....	(1)	.....	20	.....	19	.....	38	.....	23	.....	19
Canton (State-municipal)	.....	(1)	.....	394	.....	309	.....	183	.....	335	.....	246
Chillicothe (State-municipal)	.....	(1)	.....	296	.....	226	.....	188	.....	262	.....	204
Cincinnati (State-municipal)	(1)	(1)	1,376	1,943	1,101	1,279	2,703	3,495	1,403	1,847	976	1,471
Cleveland (Federal)	50	46	94	1,206	[2] 79	[2] 491	(1)	(1)	75	288	21	122
Cleveland (State-municipal)	(1)	(1)	6,216	4,762	2,307	2,520	6,787	7,998	5,434	4,628	4,315	3,782
Columbus (State-municipal)	(1)	(1)	1,787	2,391	569	861	2,032	3,222	1,677	2,385	1,419	1,908
Dayton (State-municipal)	(1)	(1)	840	2,161	498	1,933	1,011	1,738	729	2,066	616	1,811
Hamilton (State-municipal)	.....	(1)	.....	261	.....	128	.....	100	.....	205	.....	147
Lima (State-municipal)	.....	(1)	.....	278	.....	341	.....	409	.....	278	.....	242
Mansfield (State-municipal)	.....	(1)	.....	1,084	.....	580	.....	523	.....	1,004	.....	998
Marietta (State-municipal)	.....	(1)	.....	147	.....	134	.....	86	.....	163	.....	120
Marion (State-municipal)	.....	(1)	.....	301	.....	229	.....	235	.....	275	.....	226
Portsmouth (State-municipal)	.....	(1)	.....	494	.....	325	.....	210	.....	485	.....	379

[1] Not reported.
[2] Number applying for work.
[3] 1917 inclusive of activities in cooperation with State employment office.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918—Contd.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Sandusky (State-municipal)	.....	(1)	.....	227	.....	169	.....	86	.....	189	.....	119
Springfield (State-municipal)	.....	(1)	.....	301	.....	718	.....	432	.....	293	.....	200
Steubenville (State-municipal)	.....	(1)	.....	472	.....	249	.....	266	.....	404	.....	300
Tiffin (State-municipal)	.....	(1)	.....	236	.....	281	.....	176	.....	190	.....	147
Toledo (State-municipal)	(1)	(1)	1,730	2,157	908	1,324	2,179	4,094	1,619	2,163	1,380	1,782
Washington C. H. State-municipal)	.....	(1)	.....	53	.....	55	.....	26	.....	63	.....	36
Youngstown (State-municipal)	(1)	(1)	1,106	1,444	669	882	787	1,291	1,115	1,410	997	1,334
Zanesville (State-municipal)	.....	(1)	.....	158	.....	170	.....	123	.....	141	.....	105
Total	.....	.....	.....	.....	.....	.....	.....	.....	13,597	20,660	11,022	17,022
Oklahoma.												
Enid (State)	(1)	100	96	184	[2] 123	[2] 154	(1)	(1)	90	109	85	99
Muskogee (State)	(1)	307	282	392	[2] 249	[2] 423	(1)	(1)	242	422	218	278
Oklahoma City (State)	(1)	280	446	543	[2] 450	[2] 580	(1)	(1)	429	519	368	458
Tulsa (State)	(1)	512	874	847	[2] 808	[2] 796	(1)	(1)	805	684	806	604
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,566	1,734	1,477	1,439
Oregon.												
Portland (Federal)	693	1,484	896	3,305	[2] 1,075	[2] 3,971	(1)	(1)	766	3,112	728	2,787
Portland (municipal)	510	1,160	768	2,981	259	70	(1)	(1)	(1)	(1)	665	2,787
Total	.....	.....	.....	.....	.....	.....	.....	.....	766	3,112	1,393	5,574
Pennsylvania.												
Altoona (State)	(1)	130	229	561	35	[2] 426	33	(1)	54	401	50	378
Erie (State)	.....	54	.....	313	.....	356		90	.....	296	.....	265
Harrisburg (State)	(1)	289	375	1,804	207	238	95	138	268	359	223	332
Johnstown (State)	(1)	39	177	208	74	97	25	8	78	75	64	74
New Castle (State)	.....	29	.....	97	.....	77	.....	2	.....	70	.....	70
New Kensington (State)	.....	64	.....	287	.....	[2] 279	.....	(1)	.....	180	.....	180
Philadelphia (Federal)	192	209	602	5,555	[2] 890	[2] 5,393	(1)	(1)	794	4,875	739	4,796
Philadelphia (State)	(1)	989	1,173	7,658	726	6,765	610	238	1,132	6,212	953	6,129
Pittsburgh (Federal)	39	57	1,439	1,434	[2] 700	[2] 862	(1)	(1)	429	520	350	497
Pittsburgh (State)	(1)	384	606	2,822	536	1,368	214	83	459	1,116	499	1,038
Scranton (State)	.....	3	.....	11	.....	26	.....	1	.....	24	.....	24
Williamsport (State)	.....	51	.....	435	.....	95	.....	4	.....	93	.....	74
York (State)	.....	189	.....	1,002	.....	206	.....	1	.....	113	.....	87
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,214	14,334	2,878	13,944
Rhode Island.												
Providence (Federal)	.....	10	.....	519	.....	[2] 1,358	.....	(1)	.....	335	.....	312
Providence (State)	134	96	145	143	84	407	[2] 114	20	(1)	143	145	143
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	478	145	455
South Carolina.												
Charleston (Federal)	2	10	2	491	[2] 35	[2] 160	(1)	(1)	21	122	21	122
Tennessee.												
Memphis (Federal)	17	19	30	3,093	[2] 27	[2] 2,151	(1)	(1)	17	2,044	(1)	2,021

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, FEBRUARY, 1917 AND 1918—Concld.

UNITED STATES—Concluded.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.	Feb., 1917.	Feb., 1918.
Texas.												
Dallas (municipal)	198	213	299	317	[1] 298	[2] 428	18	16	383	346	286	313
El Paso (Federal)	(3)	28	(3)	34	[4] 2	[4] 46	(3)	(3)	(3)	20	(3)	13
Galveston (Federal)	5	30	6	150	[4] 16	[4] 296	(3)	(3)	13	55	13	30
Houston (Federal)	(3)	(3)	(3)	(3)	[4] 41	[4] 14	(3)	(3)	(3)	(3)	(3)	(3)
Houston (municipal)	(3)	(3)	(3)	(3)	450	723	176	243	(3)	(3)	563	857
Total									396	421	862	1,213
Virginia.												
Norfolk (Federal)	18	78	277	2,796	[4] 99	[4] 332	(3)	(3)	85	157	26	77
Richmond (municipal)	241	164	389	215	[4] 406	[4] 434	(3)	(3)	465	333	213	145
Total									550	490	239	222
Washington.												
Aberdeen (Federal)	7	5	44	26	[4] 202	[4] 38	(3)	(3)	47	26	44	26
Bellingham (Federal-municipal)	123	110	303	189	[4] 298	200	(3)	38	299	175	275	150
Everett (municipal)	(3)	284	(3)	(3)	(3)	(3)	(3)	(3)	(3)	72	242	252
North Yakima (Federal)	244	278	243	604	[4] 608	[4] 827	(3)	(3)	343	539	308	511
Seattle (Federal)	104	383	151	8,103	[4] 1,328	[4] 6,550	(3)	(3)	125	5,139	108	4,671
Seattle (municipal)	2,173	4,211	3,296	7,660	(3)	(3)	(3)	(3)	3,362	7,782	2,957	7,120
Spokane (Federal)	81	67	127	137	[4] 374	[4] 272	(3)	(3)	110	120	105	114
Spokane (municipal)	760	850	1,780	1,272	75	25	10	.....	1,650	1,247	1,640	1,212
Tacoma (Federal-municipal)	299	523	840	1,380	[4] 1,054	[4] 4,001	(3)	(3)	816	1,212	801	1,180
Walla Walla (Federal)	75	410	95	450	[4] 516	[4] 375	(3)	(3)	95	169	78	157
Total									6,847	16,481	6,558	15,393
Wisconsin.												
La Crosse (State-municipal)	84	135	136	75	[4] 199	[4] 118	(3)	(3)	100	98	64	106
Milwaukee (State-county-municipal)	1,322	2,429	2,102	1,139	[4] 1,957	[4] 2,553	(3)	(3)	1,977	2,462	1,536	1,903
Oshkosh (State-municipal)	86	170	136	92	[4] 157	(3)	(3)	(3)	93	105	51	70
Superior (State-municipal)	209	501	465	185	[4] 379	[4] 538	(3)	(3)	416	541	392	287
Total									2,586	3,206	2,043	2,366
Wyoming.												
Cheyenne (Federal)	.....	3	.....	5	.....	[4] 61	.....	(3)	.....	32	.....	15
Grand total									88,091	153,815	75,893	133,256

CANADA.

Quebec.												
Montreal (provincial)	209	111	423	231	307	[4] 272	(3)	(3)	354	218	311	187
Quebec (provincial)	(3)	14	49	59	[4] 101	[4] 64	(3)	(3)	(3)	44	36	40
Total									354	262	347	227

[1] Including 180 transients.
[2] Including 368 transients.
[3] Not reported.
[4] Number applying for work.

WORK OF THE EMPLOYMENT EXCHANGES IN THE UNITED KINGDOM IN 1917.

The most important development of the employment exchanges during the year 1917 has been the establishment of local advisory committees. In general, there is one committee for each exchange, but in large towns in which there is more than one exchange, and in other special cases, several exchanges are grouped under one committee. Of the proposed 250 committees for the United Kingdom, some 230 have now been constituted, and 150 have held their first meetings. Each committee consists of an equal number of representatives of employers and employed, nominated, as a rule, by associations in the various localities, together with a small number of additional members (not exceeding one-third of the total membership) nominated by the Ministry of Labor as representing other interests.

The functions of the committees include the consideration of any matters arising in connection with the working of the exchanges, and are not confined to matters referred to them by the department. It is hoped by this means to bring the employment exchanges into the closest touch with employers and workpeople in the various localities, and to secure for them the fullest assistance from local knowledge and experience. An important part of their work will be in connection with the provision of substitutes for the men needed for the army and of employment for men discharged from His Majesty's forces, and the special problems arising in connection with the employment of women. Subcommittees may be appointed to deal with these and other subjects. Ultimately these committees will form an essential part of the national machinery for the resettlement of labor on demobilization.

GENERAL SUMMARY.

The activities of the employment exchanges were maintained at a high level during 1917, and the results of their work, whether measured by registrations, vacancies notified or vacancies filled, fall little short of the figures for 1916, the highest previously recorded. The number of registrations during the year amounted to 3,575,380, relating to 2,837,650 separate individuals, while the number of vacancies notified was 1,999,442, of which 1,555,223 were filled by 1,375,198 separate individuals. As in the previous year the principal feature of the work of the exchanges was the supply of labor to munition industries and other war work, rather more than half of the workers being women and girls.

The number of registrations, of individuals registered and placed, and of vacancies notified and filled on the general register during

1917 are compared with those of the previous three years in the following table:[1]

Department and year.	Number of registrations.	Number of individuals registered.	Number of vacancies notified.	Number of vacancies filled.	Number of individuals found work.
Men:					
1914	2,316,042	1,381,694	909,383	706,458	507,538
1915	1,512,335	1,072,213	1,004,970	716,816	577,206
1916	1,229,171	954,172	909,721	636,095	539,564
1917	1,167,864	938,725	906,627	623,830	539,396
Women:					
1914	707,071	476,926	312,344	232,935	160,145
1915	1,232,891	920,638	493,515	385,101	306,192
1916	1,921,826	1,501,260	846,196	695,631	615,920
1917	1,873,706	1,487,728	814,735	706,034	636,269
Boys:					
1914	211,898	157,093	157,278	103,280	85,068
1915	194,864	150,559	161,459	106,716	90,237
1916	241,314	184,443	148,091	116,900	100,053
1917	265,668	204,283	146,103	120,525	105,547
Girls:					
1914	207,441	148,310	100,019	74,236	61,320
1915	246,047	183,393	137,702	99,504	84,701
1916	266,378	203,909	145,010	108,609	95,869
1917	268,142	206,914	131,927	104,834	93,986
Total:					
1914	3,442,452	2,164,023	1,479,024	1,116,909	814,071
1915	3,186,137	2,326,803	1,797,646	1,308,137	1,058,336
1916	3,658,689	2,843,784	2,049,018	1,557,235	1,351,406
1917	3,575,380	2,837,650	1,999,442	1,555,223	1,375,198

The total number of registrations (3,575,380) in 1917, including reregistrations of the same individual, and the number of individuals registered (2,837,650), although slightly below those recorded in 1916, was above the average of the period 1914–1916. The influence of the war is shown in the proportion of registrations of men and women, for whereas 64 per cent of the individuals registered in 1914 were men and 22 per cent were women, in 1917 the proportions were 33 per cent men and 52 per cent women. The proportion of boys and girls to the total number of individuals registered showed practically no change as between 1914 and 1917 In addition to those on the general register, there were on the casual register 14,536 individual registrations in 1917 which are not included in the figures above.

The number of vacancies notified to the exchanges in 1917 (1,999,442) was slightly lower than in the previous year, but the number of vacancies filled (1,555,223) was almost equal to the corresponding figure for 1916, and was considerably above the average of the three years 1914–1916. The average daily number of vacancies filled during 1917 was 5,082, but there was considerable fluctuation in the rate during the year. The highest point was reached during the four weeks ending March 9, when the average daily rate was 5,971. From that period there was a gradual decline, which reached its lowest level in August, when the rate had fallen to 4,152; from then there was an upward movement until November, after which the

[1] From The Labour Gazette of the British Ministry of Labor, February, 1918, pp. 53–55.

seasonal decline was shown. Of the vacancies filled during 1917, 40 per cent were filled by men, 45 per cent by women, 8 per cent by boys, and 7 per cent by girls. The corresponding percentages in 1914 were 63, 21, 9, and 7, respectively. The figures given above do not include 106,221 jobs of a more or less casual nature found for dock laborers, while in addition there were 17,296 jobs filled through the clearing-house system for dock laborers at Liverpool.

The number of individuals for whom work was found (1,375,198) was the highest yet recorded. It is satisfactory to note that there has been a steady diminution in this period in the average number of times an individual was found work, the average in 1917 being only 1.13, compared with 1.37 in 1914. Of the individuals found work in 1917 the percentages were 39 for men, 47 for women, 8 for boys, and 7 for girls. In 1914 the corresponding percentages were 62, 20, 10, and 8, respectively.

The number of exchanges open at the beginning of the year was 378; at the end of the year it had increased to 388.

REGISTRATIONS.

Men.—The number of registrations in the case of men shows a slight decline as compared with 1916. This was accounted for by decreases of 62,990 in building and works of construction, and 24,254 among general laborers counterbalanced to a considerable extent by increases in most other trade groups.

Women.—The small decrease in the registrations among women is accounted for chiefly by decreases of 65,510 in domestic trades and 92,654 in ammunition and explosives, partly counterbalanced by an increase of 99,988 in engineering.

The following table shows by groups of industries the number of registrations of men and women, respectively, in 1917, insured trades being distinguished from uninsured trades:

Groups of trades.	Number of registrations.			
	Men.		Women.	
	Registrations.	Individuals registered.	Registrations.	Individuals registered.
Insured trades:				
Building	201,557	147,724	6,216	4,622
Works of construction	76,809	63,211	624	474
Sawmilling	12,332	10,095	15,370	11,386
Shipbuilding	43,573	31,200	5,244	3,805
Engineering	264,333	219,853	196,905	147,881
Ammunition, explosives, chemicals, etc	52,609	45,620	548,069	452,823
Other insured trades	46,073	40,116	55,720	43,093
Uninsured trades:				
Conveyance of men, etc	133,472	93,421	49,859	40,009
Commercial and clerical	49,030	42,967	119,951	103,362
Domestic	22,370	18,104	317,688	221,028
Government, defense, professional, etc	19,360	17,326	57,734	48,409
General laborers	147,470	120,443	142,552	113,252
Other uninsured trades	98,876	88,645	357,774	297,584
Total	1,167,864	938,725	1,873,706	1,487,728

VACANCIES FILLED.

Men.—The number of vacancies filled declined from 636,095 in 1916 to 623,830 in 1917, mostly accounted for by a decrease of 18,551 among general laborers.

The following table shows the number of skilled and unskilled vacancies filled by men in the insured trades only in 1917:

Insured trades.	Skilled.	Unskilled.
Building	63,954	42,259
Works of construction	278	72,659
Sawmilling and cabinet making	3,979	2,547
Shipbuilding	12,944	14,540
Engineering	96,706	79,634
Construction of vehicles	2,137	1,823
Manufacture of metals	9,695	5,415
Manufacture of electrical apparatus	607	75
Miscellaneous metal trades	1,979	367
Precious metals, etc	500	10
Bricks and cement	646	317
Chemicals, etc	2,949	9,051
Rubber and waterproof goods	1,091	409
Ammunition and explosives	7,407	22,365
Leather	2,082	197
Total	206,954	251,668

It will be seen that the proportion of skilled men was highest in the metal and engineering trades and in the building trades and lowest in works of construction, chemicals, ammunitions and explosives.

Women.—The number of vacancies filled by women increased from 695,631 in 1916 to 706,034 in 1917. As in 1916 the largest number of vacancies filled were in engineering, ammunition, explosives, and chemicals, and domestic service.

The following table shows the number of vacancies filled by men and women, respectively, in 1917 for both insured and uninsured trades:

Groups of trades.	Number of vacancies filled.	
	Men.	Women.
Insured trades:		
Building	106,213	4,500
Works of construction	72,937	653
Sawmilling	5,711	12,788
Shipbuilding	27,484	2,232
Engineering	176,340	173,991
Ammunition, explosives, chemicals, etc	41,772	175,749
Other insured trades	28,165	32,485
Uninsured trades:		
Conveyance of men, etc	58,071	14,527
Commercial and clerical	11,837	32,853
Domestic	7,928	130,130
Government, defense, professional, etc	6,881	12,231
General laborers	41,728	9,252
Other uninsured trades	38,763	104,643
Total	623,830	706,034

The number of cases in which men and women were placed more than once in 1917 was 154,199, or 11.6 per cent of the vacancies filled, as compared with 13.2 per cent in 1916.

Boys and girls.—There was an increase of 3,625 in the number of vacancies filled by boys and a decrease of 3,775 in the vacancies filled by girls in 1917, as compared with 1916.

Of the vacancies filled by boys 24,800, or 20.6 per cent, were first situations since leaving school. In the case of girls 28,835, or 27.5 per cent, were so filled.

The following table shows the number of vacancies filled by boys and girls, respectively, in 1917, insured and uninsured trades being distinguished:

Groups of trades.	Number of vacancies filled.			
	Boys.		Girls.	
	Vacancies filled.	Individuals placed.	Vacancies filled.	Individuals placed.
Insured trades:				
Building	2,312	2,022	197	169
Works of construction	279	267	29	29
Sawmilling	2,364	1,998	1,720	1,597
Shipbuilding	1,774	1,696	98	84
Engineering	22,231	19,408	7,139	6,528
Ammunition, explosives, chemicals, etc	5,205	4,475	6,952	6,422
Other insured trades	4,937	4,483	7,080	6,332
Uninsured trades:				
Conveyance of men, etc	23,598	19,668	10,917	9,651
Commercial and clerical	8,532	7,976	13,067	12,248
Domestic	3,656	3,077	13,667	11,606
Government, defense, professional, etc	1,897	1,752	3,413	3,230
General laborers	6,238	5,226	4,611	3,867
Other uninsured trades	37,592	35,499	35,944	32,223
Total	120,525	105,547	104,834	93,986

The proportion of vacancies filled to vacancies notified by employers was 78 per cent (men 69, women 87, boys 83, girls 79) as compared with 76 per cent (men 70, women 82, boys 79, and girls 75) in 1916.

SPECIAL SCHEMES.

In the following paragraphs some brief particulars are given fo some of the special schemes for obtaining and placing labor which are being worked by the employment exchanges.

Substitution and reinforcement.—For the purpose of securing and maintaining an adequate supply of labor for work of national importance or for releasing fit men for the Army the following schemes are in existence: (*a*) War munitions volunteers; (*b*) war work volunteers; (*c*) army reserve munitions workers; (*d*) registered substitutes; and (*e*) the substitution scheme generally. These schemes are being carried out by the employment exchanges in cooperation with the ministry of munitions or the ministry of national service, and already

many thousands of vacancies have been filled through the agency of the exchanges.

Discharged sailors and soldiers.—Since April, 1915, arrangements have been in operation under which the exchanges are furnished with particulars of men discharged from the forces in order that steps may be taken to assist them in finding suitable employment. Down to December 31, 1917, over 80,000 sailors and soldiers were placed in their first employment since discharge. Further arrangements are being made which will permit of a great extension of this branch of work.

Workmen from the dominions and colonies.—A considerable number of men from the dominions and the colonies have been recruited by the employment exchanges for munitions work in the United Kingdom.

Aliens.—The importation of alien labor for work of national importance has also been carried out by the exchanges, subject to the proviso that aliens should not be introduced where British labor was available and should not be paid wages inferior to or in excess of those normally paid to British workmen.

Women.—Over 18,000 women were enrolled during the period in the Women's Army Auxiliary Corps; over 15,000 women were placed in agriculture as ordinary exchange applicants, while more than 6,000 women were recruited under the National Service Scheme for placing women on the land. This scheme is now revised and includes hay balers for the forage committee of the ar Office, and women for timber work under the timber supply department. The national service department figures under the old scheme do not include the enrollments in the two latter departments. In addition to supplying these corps the exchanges have supplied about 4,000 women to the army and navy canteen board as manageresses and workers. The number of women supplied during 1917 to the ammunition, explosives, and chemical trades alone amounted to over 167,000.

ADVANCES TO WORKPEOPLE.

Under the powers exercised by the employment department 150,000 advances in respect of railway fares were made to workpeople during 1917, and the cost of the railway warrants issued amounted to £115,000. Advances to workpeople proceeding to "work of national importance" have been charged since August 17 at the rate of five-eighths of the prewar fare. Of the above £115,000 some £30,000 was in respect of these fares for the last five months of the year, of which £12,500 is repayable.

SEASONAL LABOR.

During the months of June to October the number of vacancies filled through the exchanges for pickers of fruit, hops, etc., was 6,699,

compared with 1,748 in 1916. Holiday workers were also placed to the number of 1,665, compared with 743 in 1916.

As in previous years, arrangements were made with the general post office to recruit temporary labor (sorters, postmen, etc.) required for the Christmas pressure. Applications numbered 39,132, compared with 39,030 in 1916, while the number of vacancies filled was 26,906 (men 5,437, women 19,879, boys 1,502, and girls 88) compared with 29,020 in 1916.

These figures are included in the various tables above.

EMPLOYMENT IN SELECTED INDUSTRIES IN FEBRUARY, 1918.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in February, 1918, from representative manufacturing establishments in 13 industries. Comparing the figures for February of this year with those from identical establishments for February, 1917, it appears that in three industries there was an increase in the number of people employed and in 10 a decrease. Men's ready-made clothing showed an increase of 4.5 per cent in this respect, and automobile manufacturing, a decrease of 10.8 per cent.

Ten industries show an increase in the total amount of the pay roll for February, 1918, as compared with February, 1917. Decreases are shown in three industries. The greatest increase shown—22.4 per cent—is in iron and steel and the largest decrease—6 per cent—is in automobile manufacturing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1917, AND FEBRUARY, 1918.

Industry.	Establishments reporting for February both years.	Period of pay roll.	Number on pay roll in February—		Per cent of increase (+) or decrease (−).	Amount of pay roll in February—		Per cent of increase (+) or decrease (−).
			1917	1918		1917	1918	
Boots and shoes	69	1 week	66,138	61,092	− 7.6	$951,523	$926,128	− 2.7
Cotton manufacturing	54	...do	53,269	49,399	− 7.3	566,569	611,446	+ 7.9
Cotton finishing	17	...do	14,953	14,533	− 2.8	201,966	219,737	+ 8.8
Hosiery and underwear	58	...do	31,330	30,483	− 2.7	318,301	343,085	+ 7.8
Woolen	51	...do	49,633	48,912	− 1.5	664,814	696,387	+ 4.7
Silk	36	2 weeks	15,765	14,651	− 7.1	378,799	358,343	− 5.4
Men's ready-made clothing	33	1 week	24,558	25,659	+ 4.5	380,265	434,448	+14.2
Iron and steel	95	½ month	147,576	150,524	+ 2.0	6,167,185	7,546,257	+22.4
Car building and repairing	23	...do	32,622	29,573	− 9.3	1,089,816	1,138,108	+ 4.4
Cigar manufacturing	62	1 week	20,570	21,093	+ 2.5	246,867	269,414	+ 9.1
Automobile manufacturing	48	...do	134,387	119,882	−10.8	2,840,688	2,668,866	− 6.0
Leather manufacturing	35	...do	19,312	18,684	− 3.3	293,153	312,208	+ 6.5
Paper making	50	...do	27,189	26,473	− 2.6	396,610	437,191	+10.2

The following table shows the number of persons actually working on the last full day of the reported pay period in February, 1917, and February, 1918. The number of establishments reporting on this question is small and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN FEBRUARY, 1917, AND FEBRUARY, 1918.

Industry.	Establishments reporting for February, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in February—		Per cent of increase (+) or decrease (−).
			1917	1918	
Boots and shoes	18	1 week	12,382	11,747	− 5.1
Cotton manufacturing	32	...do	25,156	21,967	−12.7
Cotton finishing	11	...do	9,752	9,813	+ 0.6
Hosiery and underwear	18	...do	11,804	11,572	− 2.0
Woolen	38	...do	32,245	32,661	+ 1.3
Silk	22	2 weeks	11,471	10,433	− 9.1
Men's ready-made clothing	4	1 week	3,296	4,158	+26.2
Iron and steel	73	½ month	113,263	116,068	+ 2.5
Car building and repairing	23	...do	29,031	26,479	− 8.8
Cigar manufacturing	16	1 week	4,328	4,186	− 3.3
Automobile manufacturing	25	...do	78,769	72,114	− 8.9
Leather manufacturing	16	...do	12,923	13,244	+ 2.5
Paper making	15	...do	9,581	10,203	+ 6.5

The figures in the next table show that in five industries there were more persons on the pay roll in February, 1918, than in January, 1918. A 3.5 per cent increase in men's ready-made clothing was the greatest increase and cotton manufacturing shows the largest decrease – 4.9 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY, 1918, AND FEBRUARY, 1918.

Industry.	Establishments reporting for January and February.	Period of pay roll.	Number on pay roll in 1918—		Per cent of increase (+) or decrease (−).	Amount of pay roll in 1918—		Per cent of increase (+) or decrease (−).
			January.	February.		January.	February.	
Boots and shoes	69	1 week	60,733	61,272	+0.9	$947,849	$928,473	− 2.1
Cotton manufacturing	56	...do	52,937	50,349	−4.9	678,752	620,082	− 8.6
Cotton finishing	18	...do	14,805	14,721	−0.6	228,718	222,104	− 2.8
Hosiery and underwear	57	...do	29,171	29,751	+2.0	330,791	333,883	+ 0.9
Woolen	48	...do	46,259	45,360	−1.9	734,589	643,843	−12.4
Silk	35	2 weeks	14,265	14,573	+2.2	347,678	356,555	+ 2.6
Men's ready-made clothing	33	1 week	24,615	25,482	+3.5	466,[illegible]01	490,423	+ 5.9
Iron and steel	94	½ month	151,190	151,259	+0.1	7,296,242	7,528,828	+ 3.2
Car building and repairing	23	...do	29,978	29,573	−1.4	1,122,506	1,138,108	+ 1.4
Cigar manufacturing	60	1 week	21,258	21,021	−1.1	265,074	268,457	+ 1.3
Automobile manufacturing	44	...do	113,068	112,475	−0.5	2,426,104	2,507,521	+ 3.4
Leather manufacturing	30	...do	14,541	14,255	−2.0	252,703	239,007	− 5.4
Paper making	48	...do	26,489	25,791	−2.6	423,524	424,911	+ 0.3

Of the 13 industries reporting, 8 show increases and 5 decreases in the total amount of pay roll in February, 1918, as compared with January, 1918. In men's ready-made clothing, automobile manufacturing, and iron and steel, increases of 5.9 per cent, 3.4 per cent, and 3.2 per cent, respectively, are shown.

Woolen and cotton manufacturing show marked decreases—12.4 and 8.6 per cent—which is evidently due to the fact that several plants did not operate full time during the pay-roll period.

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for January and February, 1918. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JANUARY, 1918, AND FEBRUARY, 1918.

Industry.	Establishments reporting for January and February.	Period of pay roll.	Number actually working on last full day of reported pay period in 1918—		Per cent of increase (+) or decrease (−).
			January.	February.	
Boots and shoes	21	1 week	13,018	13,157	+ 1.1
Cotton manufacturing	33	do	25,200	22,471	−10.8
Cotton finishing	12	do	9,631	9,879	+ 2.6
Hosiery and underwear	19	do	12,169	12,533	+ 3.0
Woolen	37	do	32,017	32,413	+ 1.2
Silk	19	2 weeks	9,725	9,956	+ 2.4
Men's ready-made clothing	4	1 week	3,905	4,158	+ 6.5
Iron and steel	72	½ month	113,687	116,969	+ 2.9
Car building and repairing	23	do	25,659	26,479	+ 3.2
Cigar manufacturing	19	1 week	5,086	5,068	− 0.4
Automobile manufacturing	26	do	74,781	73,150	− 2.2
Leather manufacturing	13	do	9,774	9,833	+ 0.6
Paper making	14	do	9,476	9,702	+ 2.4

In nine of 13 industries there were establishments reporting increases in wage rates during the period January 15 to February 15, 1918, and in four industries no establishments reported a change. A number of firms did not answer the inquiry relating to the wage rate changes, but in such cases it is probably safe to assume that no changes were made.

Automobile manufacturing: Reports from four plants show increases in wage rates. One plant reports an increase of 2 per cent to about 4 per cent of its force and from 10 per cent to 15 per cent to about 6 per cent of its force. One reports an increase of $0.0308 in the average hourly productive rates; one, an increase of 10 per cent to 10 per cent of its force; and another reports small increases but does not state the extent of the increases.

Boots and shoes: Thirteen plants report increases in wage rates. One plant reports an increase of 10 per cent to 75 per cent of its force;

another, an increase of 12½ per cent to about 20 per cent of its force. One reports increases ranging from 10.2 per cent to 22.1 per cent to about 10 per cent of the employees. Seven plants report a "war increase" of 5 per cent to the entire force excepting the superintendent, manager, and foremen. One plant reports an increase of piecework prices and two plants report increases but make no statement as to the per cent of increase nor the number affected.

Car building: One plant reports an increase of 6 per cent to about 2 per cent of its force.

Men's ready-made clothing: One plant reports an increase of 5 per cent to about 50 per cent of the employees.

Cotton finishing: One plant reports an increase of 5 per cent but gives no further information.

Cotton manufacturing: Six plants report increases in wage rates. One reports an increase of 10 per cent to its entire force. Another reports a 10 per cent increase to 90 per cent of its force; one, an increase of about 19 per cent to loom fixers, with 10 per cent bonus for six full days' work. One other reports a bonus of 10 per cent to all "full-time" workers. One plant reports a bonus of 10 per cent to all operatives working six full days and making $16.50 or less per week; one reports an increase of 10 per cent but gives no further data.

Hosiery and underwear: Five plants report increases in wage rates. One plant reports an increase of 15 per cent to its entire force. Another reports an increase of 10 per cent to its entire force; while another reports an increase of 11 per cent to about 50 per cent of the employees. One plant has given all its employees a bonus of 16 per cent. Another reports a few increases but does not state the amount of increase nor number affected.

Iron and steel: Four plants report increases in wage rates. One plant reports an increase of 5 per cent to 83 per cent of its force and 5.45 per cent to 14 per cent of its force. Another, an increase of 5 per cent to 80 per cent of its employees. One reports an increase of about 4 per cent to all of the employees; and another, an increase of 10 per cent to all tonnage men.

Leather: Five plants report increases in wage rates. One plant reports an increase of 10 per cent to all of the employees, while another reports a 5 per cent increase to the entire force. One reports an increase of 7 per cent to 10 per cent of its employees; another, an increase of 10 per cent to approximately 5 per cent of the force; and a third reports an increase of $3 per week to about 25 per cent of its force.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN JANUARY, 1918.

The following table, pertaining to the condition of employment in Great Britain and Ireland, was compiled from a report published in the British Labor Gazette of February, 1918.

The most important change appears in the tin-plate, steel, and galvanized sheet trades, which show a decrease of 7.7 per cent of the mills in operation, as compared with the preceding month, and a decrease of 11.9 per cent as compared with January, 1917.

No material changes relating to the number of employees in January, 1918, and December, 1917, are shown. Seamen show an increase of 6.3 per cent, while the carpet, cotton, and food preparation trades show decreases of 3.7 per cent, 2.6 per cent, and 2.3 per cent, respectively. No other trades show a change of more than 2 per cent, and leather shows no change.

In comparing January, 1918, with January, 1917, as to numbers employed, more important changes are seen. Iron and steel, tailoring, and linen show the greatest increases—5.8 per cent, 5.3 per cent, and 3.7 per cent, respectively. Seamen show a decrease of 29.7 per cent; dock and riverside labor a decrease of 29 per cent; food preparation shows a decrease of 14.3 per cent; cotton, a decrease of 13.4 per cent; quarrying, a decrease of 8.3 per cent; corset trade, a decrease of 8.1 per cent; while eight other trades show decreases ranging from 4 per cent to 6.9 per cent.

In January, 1918, as compared with December, 1917, several changes in earnings are shown. Cement and shirt and collar trades show increases of 4.3 per cent and 2.8 per cent, respectively. Linen shows a decrease of 6.9 per cent; pottery, a decrease of 5.8 per cent; while ten others show decreases ranging from 2.2 per cent to 4.6 per cent.

Comparing January, 1918, with January, 1917, in regard to earnings of employees, important changes are shown, all of which are increases. The tailoring trade shows an increase of 39.5 per cent; brick, 27.9 per cent; linen, 26.9 per cent; hosiery, 23.4 per cent; and bookbinding, 21.2 per cent. Cement and silk show increases of 20.8 per cent and 20.6 per cent, respectively. Nine other trades show increases ranging from 11.6 per cent to 19.3 per cent, while four others show minor increases.

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VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN JANUARY, 1918, AS COMPARED WITH DECEMBER, 1917, AND JANUARY, 1917.

[Compiled from figures in The Labor Gazette (London), February, 1918.]

Industries, and basis of comparison.	Per cent of increase (+) or decrease (−) in January, 1918, as compared with—	
	December, 1917.	January, 1917.
Coal mining: Average number of days worked	−0.7	− 4.2
Iron mining: Average number of days worked	− .7	(1)
Quarrying: Number of employees	− .4	− 8.3
Pig iron: Number of furnaces in blast	− .3	+ .7
Iron and steel works:		
Number of employees	+ .4	+ 5.8
Number of shifts worked	+ .3	+ 6.0
Engineering trades: Number of employees [2]	− .04	− .3
Shipbuilding trades: Number of employees [2]	+ .04	+ .01
Tin-plate, steel, and galvanized sheet trades: Number of mills in operation	−7.7	−11.9
Cotton trade:		
Number of employees	−2.6	−13.4
Earnings of employees	−4.6	+ 4.3
Woolen trade:		
Number of employees	−1.8	− 4.9
Earnings of employees	−2.2	+17.0
Worsted trade:		
Number of employees	−1.3	− 2.6
Earnings of employees	−3.7	+17.6
Hosiery trade:		
Number of employees	+ .5	− 2.1
Earnings of employees	+1.1	+23.4
Jute trade:		
Number of employees	−1.8	− 2.2
Earnings of employees	−3.4	+19.3
Linen trade:		
Number of employees	−1.7	+ 3.7
Earnings of employees	−6.9	+26.9
Silk trade:		
Number of employees	− .6	− 2.6
Earnings of employees	− .5	+20.6
Carpet trade:		
Number of employees	−3.7	− 4.0
Earnings of employees	−3.7	+15.0
Lace trade:		
Number of employees	− .4	− 5.2
Earnings of employees	−1.5	+ 9.4
Bleaching, printing, dyeing, and finishing:		
Number of employees	−1.3	− 4.5
Earnings of employees	−2.8	+19.2
Boot and shoe trade:		
Number of employees	− .4	− 6.9
Earnings of employees	−2.9	+ 5.4
Leather trades: Number of employees [2]	(1)	+ .4
Tailoring trades:		
Number of employees	− .2	+ 5.3
Earnings of employees	−2.7	+39.5
Shirt and collar trade:		
Number of employees	−1.5	− 6.8
Earnings of employees	+2.8	+15.4
Other clothing trades:		
Dressmaking and millinery—		
Number of employees	+1.8	− 1.3
Wholesale mantle, costume, blouse, etc.—		
Number of employees—London	+1.6	(1)
Number of employees—Manchester	−1.7	− 1.7
Number of employees—Glasgow	−1.5	(1)
Corset trade—Number of employees	−1.4	− 8.1
Building and construction of works: Number of employees	− .05	+ .4
Sawmilling and machining: Number of employees	− .06	− .1
Brick trade:		
Number of employees	− .8	+ 1.4
Earnings of employees	−1.8	+27.9
Cement trade:		
Number of employees	−1.1	− 5.3
Earnings of employees	+4.3	+20.8
Printing, bookbinding, and paper trades:		
Printing trades—		
Number of employees reported by trade-unions [2]	+ .3	+ .3
Number of employees reported by employers	−1.5	− 6.9
Earnings of employees reported by employers	−1.7	+11.6
Bookbinding trade—		
Number of employees reported by trade-unions [2]	+ .1	+ .3
Number of employees reported by employers	− .2	− 2.9
Earnings of employees reported by employers	− .7	+21.2
Paper trades—Number of employees	+1.2	− .7
Pottery trades:		
Number of employees	−1.6	− 3.1
Earnings of employees	−5.8	+13.3
Glass trades:		
Number of employees	− .4	− .9
Earnings of employees	−3.8	+15.6
Food preparation trades:		
Number of employees	−2.3	−14.3
Earnings of employees	−2.8	+ 9.2
Dock and riverside labor: Number of employees	− .2	−29.0
Seamen: Number of employees	+6.3	−29.7

[1] No change. [2] Based on unemployment returns.

The table following shows by occupation groups, the number of individuals registered, the vacancies notified, and the vacancies filled, indicating the extent of unemployment in Great Britain during the

five weeks ending January 11, 1918. The totals for this period are also compared with the totals for the four weeks ending December 7, 1917.

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE 5 WEEKS ENDED JANUARY 11, 1918.

A.—Insured trades.

Occupation group.	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Building:										
Carpenters, joiners, etc.	3,156	264	3,504	149	2,237	141	86	1	44	1
Bricklayers	1,644	4	2,447	.....	1,209	.....	3	.....	3	.....
Masons	396	1	49	1	45	.....	2	.....	1	.....
Plasterers	636	.....	206	.....	164	.....	.....	.....	.....	.....
Painters, decorators, etc.	3,454	308	1,160	152	841	151	14	.....	9	2
Plumbers, glaziers	457	3	496	1	229	2	33	.....	23	.....
Other skilled occupations	82	1	51	.....	13	.....	10	.....	5	.....
Laborers	6,428	93	5,832	93	4,155	78	110	.....	100	.....
Works of construction	8,950	33	11,968	29	9,519	33	53	.....	53	.....
Saw milling	1,124	1,381	929	1,143	533	948	240	113	220	94
Shipbuilding:										
Platers, riveters	1,169	12	1,439	12	771	12	59	.....	37	.....
Shipwrights	301	2	815	.....	266	.....	48	.....	20	.....
Laborers	2,401	259	2,526	163	1,472	166	124	12	111	15
Engineering:										
Molders	1,088	132	707	75	532	60	73	22	55	14
Smiths	597	91	559	113	274	63	28	4	17	4
Erectors, fitters, turners	6,816	2,063	6,860	822	4,900	743	712	24	689	25
Metal machinists	2,300	8,241	1,826	6,450	1,167	5,946	510	323	496	260
Wiremen	573	68	819	87	352	72	48	5	42	6
Other skilled occupations	2,597	7,098	2,077	2,428	1,303	2,114	266	146	205	118
Laborers	8,828	2,099	7,388	2,095	5,982	1,858	351	99	364	79
Construction of vehicles	740	447	434	367	218	342	39	5	37	3
Cabinet making, etc.	219	126	138	15	70	10	36	6	33	4
Miscellaneous metal trades	1,427	1,701	1,665	903	1,161	752	234	306	202	256
Precious metals, etc.	122	176	159	153	43	116	44	33	33	27
Brick, cement	51	59	205	62	65	52	11	6	5	2
Chemicals, etc.	635	613	938	669	548	574	144	80	142	72
Rubber and waterproof goods	154	661	169	468	149	459	37	11	30	35
Ammunition and explosives	3,106	27,927	1,857	6,357	1,983	6,127	251	299	255	341
Leather:										
Boots and shoes	208	248	177	126	96	84	44	43	40	26
Excluding boots and shoes	232	413	101	249	51	221	43	104	36	73
Total	59,891	54,524	57,501	23,182	40,348	21,129	3,653	1,642	3,307	1,457
Total, males and females	114,415		80,683		61,477		5,295		4,764	
Four weeks ending Dec. 7, 1917	115,089		88,387		67,100		5,624		4,979	

B.—Uninsured trades.

Mining and quarrying	581	10	857	6	365	1	66	4	34	5
Textile:										
Cotton	284	669	304	712	148	320	111	112	82	67
Wool and worsted	152	260	97	200	55	145	44	51	35	50
Silk, flax, linen, etc.	261	1,411	180	568	126	473	166	293	140	317
Dress:										
Tailors and tailoresses	167	566	90	344	21	241	34	152	27	128
Dressmakers and milliners	.....	478	.....	171	.....	109	.....	153	.....	117
Seamstresses	.....	725	.....	334	.....	290	.....	214	.....	144
Others	129	805	35	193	10	193	34	58	21	49
Conveyance of men, goods, etc.:										
On railways	169	180	437	195	303	183	117	1	96	2
On roads, seas, rivers, etc.	8,451	2,697	6,102	1,678	4,249	1,321	2,247	1,125	1,722	829
Agriculture	619	673	602	672	127	345	77	22	45	15

INDIVIDUALS REGISTERED, VACANCIES NOTIFIED, AND VACANCIES FILLED IN THE 5 WEEKS ENDED JANUARY 11, 1918—Concluded.

B.—Uninsured trades—Concluded.

Occupation group.	Adults.						Juveniles.			
	Individuals registered during period.		Vacancies notified during period.		Vacancies filled during period.		Vacancies notified during period.		Vacancies filled during period.	
	Men.	Women.	Men.	Women.	Men.	Women.	Boys.	Girls.	Boys.	Girls.
Paper, prints, books and stationery	141	905	219	544	76	414	205	407	178	321
Wood, furniture, fittings, etc.	16	80	41	50	5	40	64	48	53	36
Pottery and glass	79	226	107	137	47	79	60	71	61	41
Food, tobacco, drink, and lodging:										
Bread and biscuit, etc., makers	92	243	97	362	22	307	72	65	53	57
Waiters	92	1,361	70	844	35	621	32	47	29	41
Others (jam, cocoa, and tobacco)	131	594	247	860	96	729	83	221	62	179
Brushes, brooms, etc.	10	22	9	7	5	5	10	25	8	13
Gas, water, electrical supply, and sanitary service	178	41	917	152	609	125	19	.....	16	.....
Commercial and clerical	3,554	9,224	1,438	3,245	989	2,523	805	1,099	597	922
Domestic:										
Laundry and washing service	1,403	648	1,181	1,240	614	816	402	116	267	73
Private indoor servants		1,477		2,133		568		236		85
Other indoor servants		6,659		6,515		4,616		349		206
Charwomen, day girls, day servants		8,658		9,155		6,376		1,058		521
Others		274		176		125		29		9
General laborers	11,398	7,791	3,452	1,160	2,731	836	530	401	450	338
Shop assistants	508	2,578	195	464	82	305	104	484	78	370
Government, defense, and professional	1,435	4,726	886	1,642	608	1,524	356	255	353	224
All others	1,247	2,243	617	265	365	194	1,576	570	1,498	499
Total	31,097	56,224	18,180	34,024	11,688	23,824	7,214	7,666	5,905	5,658
Total, males and females	87,321		52,204		35,512		14,880		11,563	
4 weeks ending December 7, 1917	101,230		52,794		36,355		16,600		12,856	
Casual employment (men only)	93		.....		1,610		.....		.....	

This table shows that during the period in the insured trades 114,415 adults registered for work, 57,891 men and 54,524 women. There were 85,978 vacancies reported, 57,501 men, 23,182 women, 3,653 boys, and 1,642 girls. The number of positions filled was 66,241, 40,348 men, 21,129 women, 3,307 boys, and 1,457 girls. The occupation group in which the largest number of positions were filled by adults were: Works of constructions, 9,552; ammunition and explosives, 8,110; laborers, engineering, 7,840; metal machinists, 7,113; erectors, 5,643; and laborers, building, 4,233.

In the uninsured trades there were 87,321 registrations, 31,097 men and 56,224 women. The number of vacancies reported was 67,084, 18,180 men, 34,024 women, 7,214 boys, and 7,666 girls. The total number of positions filled was 47,075, 11,688 men, 23,824

women, 5,905 boys, and 5,658 girls. The occupation groups in the uninsured, in which the largest number of positions were filled by adults, were: Domestic service, 13,115; conveyance of men, goods, etc., 6,056; general laborers, 3,567; and commercial and clerical, 3,512.

The total number of positions filled by adults in both the insured and uninsured trades during the five weeks ending January 11, 1918, as compared with the preceding four weeks ending December 7, 1917, shows a decrease of 6.3 per cent. The decrease in the number of positions filled by men was 3 per cent; by women, 9.7 per cent. The largest number of women were employed in domestic service.

No comparison can be made of the number of registrations in the employment exchanges of Great Britain with the number of applications for work reported by the employment offices of the United States, owing to the differences in method of registering applicants. It is possible, however, to make a comparison of positions filled by the offices in the two countries. The figures show the following result:

	Number of offices.	Positions filled.		
		Total.	Average per day.	Average per day, each office.
Great Britain	388	113,316	4,047	10.4
United States	99	93,149	3,583	36.2

The above figures are significant in view of the fact that a very large percentage, if not practically all, of the employment office work of Great Britain is done through the free-employment exchanges, while in the United States but a very small proportion of the placements is made through the public-employment offices, the much greater proportion being handled by the private-employment agencies.

EMPLOYMENT SYSTEM OF THE LAKE CARRIERS' ASSOCIATION.

At a convention held in New York City in December, 1916, the International Seamen's Union of America adopted a resolution requesting the United States Department of Labor "to investigate the employment system, shipping offices, and so-called 'welfare plan' of the Lake Carriers' Association, and to make public the results of such investigation." The resolution charged that this welfare plan was virtually a strike-breaking and blacklisting system, the continuation of which would almost certainly lead to a serious strike on the Lakes. In compliance with the above resolution an investigation was made by the United States Bureau of Labor Statistics, the results of which are presented in Bulletin No. 235, just issued.

The Lake Carriers' Association is composed of 64 vessel owners or managers, operating over 400 vessels carrying iron ore, coal, and grain upon the Great Lakes. Its declared object, among other things, is "to establish and maintain by contract or otherwise such amicable relations between employers and employed as will avoid the public injury that would result from lockouts and strikes in the lake carrying-service."

The "welfare plan," as finally put into effect in 1908, provides for the maintenance of assembly rooms at the various lake ports and sailors are given the privileges of these rooms on payment of an annual fee of $1, which entitles them to a certificate of membership in the "welfare plan." When labor is at a premium nonmembers may be shipped, but preference is given to welfare men. Each man registered is given a registration or record discharge book, called by the association the welfare book, in which is kept a serial record of his service on the boats of the association. When applying for work the man must present this book to the "commissioner" or shipping master in charge of the local assembly room or shipping office and to the captain or chief engineer of the boat on which he ships. The book is kept in the possession of the captain or chief engineer until he signs the sailor's discharge record for the trip. If the entry be good or fair the book is returned direct to the man, but if the officer decides that such entry can not be made, and in case of desertion or failure to serve after being engaged, the book is returned by the master to the secretary of the association with an explanatory statement. The association thereupon takes such action as it may deem wise and just as to canceling the sailor's certificate of membership.

At the time the welfare plan was put into effect the association announced that it had definitely adopted the "open-shop principle." The majority of the welfare men are nonunion men and the union man who registers under the plan ceases to be an active union man. Many seamen are bitterly antagonistic to this shipping system. Their opposition is partly due to the fact that apart from its merits or demerits they feel that it is a plan imposed upon them in the operation of which they have no part. They consider that it is undemocratic and that it seriously infringes upon their freedom of action and their right to organize for the betterment of their working conditions. The union men insist that despite the general improvement of sanitary and labor conditions aboard ship, the sailors are now really worse off than they were prior to the inauguration of the welfare plan and that they are subject to a system of virtual espionage, and under constant apprehension of the black list. In 1916 the rate of labor turnover on the association's books was more than 600 per cent.

The association denies that the assembly rooms are shipping or employment offices on the ground that it is the captain of the boat and not the commissioner who does the actual hiring. As the scheme actually operates, however, the assembly rooms become clearing houses for the buying and selling of seafaring labor, which is virtually engaged by the commissioner subject to the approval of the ultimate employer. While there is no question that the association is making a systematic and sincere attempt to enforce a policy of neutrality toward the unions, the interpretation and practical application of its open-shop principle and the actual operation of the welfare plan have undeniably had a damaging effect upon the lake unions.

A strike for higher wages and for the abolition of the welfare plan—particularly the continuous discharge book feature—was ordered for October 1, 1917. In view of this contemplated strike the United States Shipping Board made an investigation of the welfare plan and the discharge-book system. Conferences were meanwhile held with representatives of the lake seamen's unions and the Lake Carriers' Association, at which the Shipping Board was assured that the Lake Carriers' Association would abolish the discharge book and modify the welfare plan in any manner the board might direct after fair investigation. As a result of its investigation the Shipping Board decided that the discharge book is undesirable and should be abolished.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE.

ADEQUACY OF WORKMEN'S COMPENSATION LAWS.[1]

BY CARL HOOKSTADT.

Forty States and Territories have placed workmen's compensation laws upon their statute books. Ten of these laws were enacted in 1911 and have therefore been in effect about six years. It may be well to consider at this time the extent to which these laws are meeting the requirements for which they were enacted. In other words, to what degree are they adequate? What proportion of employees are receiving compensation? How much are they receiving? Is it sufficient for their needs? To what extent are the laws operating and effective? That is, do injured employees actually receive the benefits provided for in the statutes?

SCOPE.

It is of no particular significance to an injured workman to know that the compensation law in his State has a high scale of benefits if his occupation does not come within the scope of the act. It is important, therefore, to ascertain just how many employees are covered by the various compensation laws. New Jersey is the only State which includes all employments, while Hawaii is the only jurisdiction covering all employments except those nonindustrial in character. Fourteen States[2] limit their acts to "hazardous" employments, thereby excluding the trades and professions as well as farm labor and domestic service. Eighteen States[3] exempt the small employers, i. e., those having less than a stipulated number of employees. Eight[4] exclude all public employees, while most of the States exclude casual labor and employments not conducted for gain or for the purpose of the employer's business. Interstate railroad employees are necessarily excluded because of Federal legislation.

But what do these various exclusions mean when applied in the several States? How many employees are actually excluded through the nonhazardous, or numerical, or agricultural, or domestic service

[1] Partial summary of a forthcoming bulletin (No. 240) on the comparison of workmen's compensation laws in the United States.

[2] Alaska, Arizona, Illinois, Kansas, Louisiana, Maryland, Montana, New Hampshire, New Mexico, New York, Oklahoma, Oregon, Washington, and Wyoming.

[3] Alaska, Colorado, Connecticut, Delaware, Kansas, Kentucky, Maine, New Hampshire, New Mexico, Ohio, Oklahoma, Porto Rico, Rhode Island, Texas, Utah, Vermont, Wisconsin, and Wyoming.

[4] Alaska, Arizona, Delaware, New Hampshire, New Mexico, Porto Rico, Texas, and West Virginia.

exemptions? An attempt has been made to compute the actual number of employees excluded. These computations are based upon a detailed study of the Federal occupation census of 1910, and though the absolute figures would understate the numbers as they exist at present the percentages would probably remain the same.

The following table shows the number and percentage of employees excluded in the 40 compensation States for each of the several classes of occupations:

NUMBER AND PER CENT OF EMPLOYEES EXCLUDED FROM PROVISIONS OF COMPENSATION ACTS, BY CLASSES OF OCCUPATIONS.

Employments excluded.	Number of States excluding each occupational group.	Number of employees excluded.	Percentage of employees excluded to total number of employees.	Percentage of employees excluded to total employees excluded.
Agriculture	38	2,213,259	11.1	35.5
Domestic service	39	1,965,000	9.9	31.5
Nonhazardous (trades, professions, etc.)	14	1,773,998	8.9	28.5
Small employers	18	283,279	1.4	4.5
Total	40	6,236,136	31.3	100.0

It will be noted that 6,236,136 or 31.3 per cent of all employees in the 40 compensation States are not covered by the several acts. In addition there are some 1,200,000 interstate railroad employees excluded from the benefits of State compensation acts because of Federal jurisdiction over interstate commerce. The exclusion of 31.3 per cent of the employees, however, does not necessarily mean that the same percentage of accidents are noncompensable. The exempted employments, especially the professions, domestic service, and clerical occupations, are on the whole less hazardous than manufacturing and mining.

But thus far it has been assumed that all the employers coming within the scope of the law in the elective States have actually elected to come under the compensation provisions of the acts. As a matter of fact, however, this is not true. In some States practically all of the employers have accepted the act, while in others relatively few have done so. In New Hampshire only 19 employers, employing 19,000 persons, were under the compensation law in 1916. These employees constitute less than 25 per cent of those potentially covered by the act and only 13 per cent of the total employees in the State. The Iowa compensation commissioner estimated (1915) that approximately 25 per cent of the employees coming within the scope of the compensation law were deprived of compensation benefits because of the employers' rejection of the act. The Oregon industrial commission stated (1915) that 15 to 20 per cent of the employees were

not entitled to compensation benefits for similar reasons. The United States Bureau of Labor Statistics estimated[1] that in Massachusetts less than 78 per cent of the total employees in the State are entitled to compensation, whereas not less than 85 per cent come within the statutory scope of the act. The Illinois Industrial Accident Board reported in 1915 that 831 employers, 187 of whom were mine operators, had rejected the compensation law. Because of this refusal of employers to accept the compensation provisions elective compensation acts have been severely criticized. The Massachusetts board recommended the substitution of a compulsory law for the elective system, while Illinois changed to a compulsory law in 1917.

As already noted, the number of employees outside the statutory scope of the acts in the 40 compensation States is estimated at 31.3 per cent. In view of the large number of rejections just cited, the number of accidents not receiving compensation is not far from the same percentage.

COMPENSATION BENEFITS.

In any attempt to determine the adequacy of the compensation benefits provided for in the various laws it is obviously necessary to have a standard of adequacy. No such standard has as yet been adopted or agreed upon. No 2 of the 40 States have adopted the same type of law and with the possible exception of Oregon and Washington no State seems to have followed any definite theory in this respect. The necessity for a workable law, not excessively burdensome to the employer and not conducive to malingering, while affording such reasonable benefits to the injured workman as to prevent hardships to himself and his dependents, has led to a wide variety of attempts to determine the proper amounts to be awarded. In general it may be said that the State compensation schedules are based upon the loss of earning power modified both by the employee's need and by the desire to limit the employer's burden.

One of the accepted principles of workmen's compensation is that the industry shall bear the burden of industrial accidents. But compensation benefits based upon the social need of the injured employee or his family do not accord with this principle although payments upon such a basis may be desirable as a social and economic policy. The compensation benefits of the Oregon and Washington laws are based upon this principle of need rather than upon loss of earning power. It must not be understood, however, that the employer is bearing the entire cost of industrial accidents. As a matter of fact, he is not bearing one-half the burden and in many cases not 25 per cent of it.

[1] See MONTHLY REVIEW for March, 1917, p. 414.

For the present purpose let it be assumed that an adequate workmen's compensation law is one which provides complete indemnity for the loss of earnings resulting from the injury. Such indemnity shall include necessary medical and surgical service and full wages for total disability or death, during such disability or during the industrial life expectancy of the employee at the time of the injury. In case of partial disability compensation shall be proportioned to the wage loss and continue during disability. The compensation benefits thus based upon loss of earnings would also fulfill the requirements as to social needs, assuming, of course, that the workers' wages adequately meet their needs. With such a standard of adequacy as a basis, to what extent do the present laws meet the requirements?

WAITING PERIOD.

With the exception of the laws of Oregon and of Porto Rico every State compensation law provides for a preliminary waiting period during which no compensation is paid. The reason for this noncompensable preliminary period is to prevent malingering and to avoid the undue administrative expense resulting from a policy of paying compensation for every accident causing disability. Just what the most advantageous waiting period is has never been determined. Oregon and Porto Rico, as already stated, have none. It would seem, however, that a waiting period of not over seven days is ample to meet the objections mentioned; and if the disability continues longer than three weeks compensation should be paid from date of injury. Twenty-three States (57.5 per cent) have a waiting period in excess of seven days. Of these, New Mexico requires three weeks; California, Massachusetts, Utah, and Wyoming require 10 days; while 18 States [1] require two weeks. Thirteen States,[2] however, abolish the waiting time entirely if the disability continues beyond a stipulated period.

SCALE.

In no State does the amount of compensation provided equal full wages. Of the 37 States in which the amount of compensation is based upon wages Porto Rico alone provides 75 per cent; Massachusetts, Nebraska, New York, and Ohio provide 66⅔ per cent; California, Illinois, Kentucky, and Wisconsin 65 per cent; Hawaii, Kansas, Minnesota, and Texas 60 per cent; Idaho, Indiana, and Utah 55 per cent; while 21 States,[3] or 57 per cent, provide only 50 per cent.

[1] Oregon, Arizona, Colorado, Delaware, Iowa, Kentucky, Maine, Maryland, Michigan, Montana, New Hampshire, New Jersey, New York, Oklahoma, Pennsylvania, Rhode Island, South Dakota, and Vermont. (Vermont reduced its waiting period to one week in 1917, effective July 1, 1918.)

[2] Alaska, Arizona, Illinois, Louisiana, Michigan, Nebraska, Nevada, New York, Rhode Island, South Dakota, Washington, Wisconsin, and Wyoming.

[3] Alaska, Arizona, Colorado, Connecticut, Delaware, Iowa, Louisiana, Maine, Maryland, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Vermont, and West Virginia.

MAXIMUM LIMITATIONS.

The amount of compensation benefits derived from applying the several percentages to the wages is, however, further reduced through various limitations. These limitations consist of maximum weekly compensation payments, maximum periods during which compensation is to be paid, and maximum amount of benefits any employee or beneficiary can receive. Practically all of the States place a limitation upon the amount of weekly or monthly compensation. In 23 States the weekly maximum is limited to $12 or less. The extent to which compensation benefits are reduced by the weekly maximums depends, of course, upon the wage level in the several States. At present the influence of this factor has greatly increased because of the high wage level due to the war.

COMPENSATION PERIODS.

If an adequate compensation law requires the payment of benefits during the disability or dependency of the injured employee or his dependents, then few laws are adequate. Seventeen States [1] provide compensation payments for life in case of permanent total disability. An equal number of States provide that benefits for such disabilities shall continue for 8 or 10 years. The remaining 6 States make varying provisions. The statutory benefits in case of fatal accidents are, on the whole, less liberal than those provided for permanent total disability. This is no doubt due to the belief that a workman totally and permanently disabled is a greater economic loss to his family than if he were killed outright. Whereas 17 States make compensation benefits payable for life in case of permanent total disability, only 5 States [2] provide that benefits in case of death shall continue until the death or remarriage of the widow. A large proportion of the States (17) furnish benefits for approximately 6 years. In addition to the limitation placed upon the duration of payments either in case of disability or death most of the States also place a limit upon the total amount of compensation which any beneficiary can receive. In case of partial disability accidents most of the State laws provide for a schedule of specified injuries causing dismemberment, for which benefits are awarded for fixed periods based roughly upon the loss of earning capacity caused by the loss of the organ. Compensation for such injuries ranges ordinarily from 200 weeks for the loss of an arm to 15 weeks for the loss of a little finger.

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[1] Arizona, California, Colorado, Delaware ($4,000 maximum), Idaho, Illinois, Maryland ($5,000 maximum), Montana, Nebraska, Nevada, New York, Ohio, Oregon, South Dakota ($3,000 maximum), Utah Washington, and West Virginia.

[2] Nevada, New York, Oregon, Washington, and West Virginia.

To what extent, then, are the benefits of our State compensation laws adequate from the viewpoint of the duration of payments for the several kinds of disabling accidents? In other words, what is the ratio of payment periods provided for in the compensation acts to the life expectancy of the injured man at the time of the accident? Again, how fully do the specific injury-schedule payments meet the loss of earning power occasioned by these injuries? The committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions in a recent report formulated a schedule of severity ratings of industrial injuries computed on the basis of time lost.[1] Death and permanent total disability, each rated at 1,000 weeks, are used as the base and partial disabilities computed therefrom.

The purpose of the schedule of severity ratings was to obtain a more accurate measure of industrial hazards and was not intended as a basis of compensation awards. In fact, the committee disclaims any such intention. Assuming, however, that the schedule is a reasonable measure of adequacy for compensation payment, it is interesting to note the percentages of adequacy for the more important injuries provided for by the several State compensation laws. The following table attempts to show such percentages of adequacy using the committee's schedule as 100 per cent. These percentages refer only to periods of time during which compensation is paid and do not take into account the per cent or rate of compensation.

[1] The committee's severity rates of the more important injuries expressed in time lost are as follows: Death and permanent total disability, 1,000 weeks; loss of arm, 600 to 750 weeks; hand, 500 weeks; thumb, 100 weeks; index finger, 50 weeks; leg, 500 to 750 weeks; foot, 400 weeks; great toe, 50 weeks; sight of one eye, 300 weeks; hearing, one ear, 100 weeks; hearing, both ears, 500 weeks. For a complete report of this committee see pp. 123 to 143 of the October, 1917, MONTHLY REVIEW.

PERCENTAGE OF ADEQUACY OF DURATION OF PAYMENTS FOR SPECIFIED INJURIES PROVIDED FOR IN THE SEVERAL STATES, USING THE I. A. I. A. B. C. COMMITTEE SCHEDULE AS 100 PER CENT.

State.	Total disability.	Loss of—							
		Arm.	Hand.	Thumb.	Index finger.	Leg.	Foot.	Great toe.	Sight of 1 eye.
Committee	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Colorado	100	28	21	35	36	28	26	36	35
Connecticut	52	28	31	38	76	36	33	76	35
Delaware	.....	26	32	.....	.....	39	36	.....	38
Hawaii	31	42	49	60	92	58	51	76	43
Idaho	100	27	30	30	40	30	31	30	33
Illinois	100	27	30	60	70	35	31	60	33
Indiana	50	27	30	60	60	35	31	60	33
Iowa	40	27	30	40	60	35	31	50	33
Kansas	42	28	30	60	74	40	31	60	37
Kentucky	42	27	30	60	90	40	31	60	33
Louisiana	40	27	30	50	60	35	31	40	33
Maine	50	20	25	50	60	30	31	50	33
Maryland	.....	27	30	50	60	35	38	50	33
Michigan	50	27	30	60	70	35	31	60	33
Minnesota	55	27	30	60	70	35	31	60	33
Montana	100	27	30	30	20	36	31	30	33
Nebraska	100	27	30	60	70	35	31	60	33
Nevada	100	29	35	65	78	39	38	60	36
New Jersey	40	27	30	60	70	35	31	60	33
New Mexico	52	20	22	30	40	24	25	30	33
New York	100	42	49	60	92	58	51	76	43
Ohio	100	27	30	60	70	35	31	60	33
Oklahoma	50	33	40	60	70	35	38	60	33
Oregon	100	55	66	104	138	76	69	86	58
Pennsylvania	50	29	35	.....	.....	43	38	.....	33
South Dakota	.....	27	30	40	60	30	31	60	33
Texas	40	27	30	60	90	40	31	60	33
Utah	100	27	30	30	20	30	31	30	33
Vermont	26	23	28	40	50	34	30	40	33
Wisconsin	.....	43	48	70	64	44	45	50	47
Average	64	29	33	53	66	38	35	55	36

In considering the above table it must be borne in mind that several States[1] pay compensation for total disability during the healing period in addition to the schedule of payments for partial disability. Two important facts stand out, however. One is the relatively greater awards for the minor injuries; and the other is the small proportionate awards for all injuries. The average statutory compensation provided for the loss of an arm, hand, or foot is approximately one-third of the loss of earning capacity caused by such injuries. Moreover, this schedule, as already noted, refers only to time. When the statutory wage percentages are applied the percentages of adequacy are still further reduced. This can better be shown by way of a concrete illustration. For example, what compensation benefits would a man earning $20 a week receive for various types of injuries under the committee's schedule and under the laws of New York and New Mexico? These two States are taken because they represent, respectively, the most liberal and least liberal of the several compensation States.

[1] Illinois, Nevada, New Jersey, Ohio, South Dakota, and Vermont.

COMPARISON OF BENEFITS UNDER I. A. I. A. B. C. COMMITTEE SCHEDULE AND UNDER COMPENSATION LAWS OF NEW YORK AND NEW MEXICO.

Type of injury.	Money benefits received.			Per cent of New York benefits to committee benefits.	Per cent of New Mexico benefits to committee benefits.
	Committee.	New York.	New Mexico.		
Permanent total disability	$20,000	$13,333	$5,200	67	26
4 weeks' disability	80	27	10	33	13
13 weeks' disability	260	173	100	67	38
Loss of—					
Arm at shoulder	15,000	4,160	1,500	28	10
Hand	10,000	3,253	1,100	33	11
Thumb	2,000	800	300	40	15
Index finger	1,000	613	200	61	20
Leg at knee	10,000	3,840	1,200	38	12
Foot	8,000	2,733	1,000	34	13
Great toe	1,000	507	150	51	15
1 eye	6,000	1,707	1,000	28	17

	New York.	New Mexico.
Per cent of employees covered by act	59	31
Medical service furnished for ... days	60	[1]21

[1] Maximum, $50.

The above table fully substantiates the statement of Mr. A. W. Whitney that "In practice the beneficence of the most liberal law is probably not more than 50 per cent of full indemnity and the beneficence of the least liberal law is not over half that of the most liberal."[1] When the inadequate medical service and the inadquate scope of the acts are also considered the inadequacy of our compensation laws is striking. In view of these facts it is rather misleading to say that the burden of industrial accidents is borne by the employer. As a a matter of fact at least from 50 to 75 per cent of this burden is borne directly by the employee.

ADEQUACY OF DEATH BENEFITS.

Compensation benefits in case of death have been based to a large extent upon the principle of need. Thus, in many cases the percentage of compensation has been proportioned in accordance with the conjugal condition and number of dependents of the injured man. The statutory provisions for fatal injuries have already been noted. To what extent our State compensation laws are meeting the economic needs of the decedent's family is indicated by a study recently made by the United States Bureau of Labor Statistics.[2] The purpose of this investigation was to ascertain what effect workmen's compensation laws had in diminishing the necessity of industrial employment of women and children. The States of Connecticut

[1] Bul. 212, U. S. Bureau of Labor Statistics, Proceedings of the conference on social insurance, p. 194.

[2] Bul. 217, U. S. Bureau of Labor Statistics, effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children. (In press.)

and Ohio were selected. The study was made in 1915 and was limited to fatal and permanent total disability accidents. The Connecticut law then provided weekly compensation benefits of 50 per cent of the employee's wages, but not over $10,[1] for a period of 312 weeks for death; the Ohio law similarly provided weekly benefits of 66⅔ per cent of wages, but not over $12, for the same period.[2]

It was found that the average amount of compensation awarded to families of married decedents in Connecticut was $2,269, while the average in Ohio was $3,098. The larger amount in Ohio is due to the higher percentage of compensation, higher weekly maximum, and higher wage level. The loss of the decedent's wages to the family "even when modified by compensation, was a serious matter, in some cases amounting to disaster. A rough measure of the extent of the loss may be found by comparing the family income before and after the accident. This is not a satisfactory measure, because after the accident the ncome sometimes consists of the earnings of children who have been taken from school to work or of mothers who must leave their children to go out and earn food for them, but at least it gives some idea of what the worker's death has meant financially to his family."

There were several methods of making up the deficit in the family income. Children might be taken out of school and put to work, the family might move into cheaper quarters, the widow might go to work, or friends or relatives or charitable organizations might be called upon for help. These methods were resorted to in varying degrees. As regards the conditions in Connecticut the report elicited the following facts: Taking children out of school to work was the method least frequently used. Only two cases were found in which this had been done. Moving into cheaper quarters was a more common means of meeting the situation. Eight families, not counting those to whom relatives gave a home, made this change. The commonest method of meeting the emergency was for the widow to find some way of earning money. Of 50 widows, 10 worked for money both before and after the fatality, and 11 who had not been gainfully employed before took up such employment after losing their husbands. Of all those subsequently employed, 7 kept roomers or boarders, 6 did some form of domestic work, 4 were employed in factories, while the others were employed in various other occupations. Of the 11 women who took up work for pay as a result of the husband's death, 5 worked away from home even though they had small children.

In Ohio, for reasons already stated, the compensation benefits received were somewhat greater than those awarded in Connecticut.

[1] Increased to $14 in 1917.

[2] Increase to 8 years in 1917.

The economic distress therefore was not so acute. The methods and needs of making up the deficit in family income were, however, similar to those in Connecticut.

Summarizing the combined results of the two States shows the following facts: Taking the children out of school to put them to work was seldom resorted to; the percentage of widows who took up gainful pursuits as a result of the death of their husbands was 26.3 per cent; the percentage of families of married decedents who moved into cheaper quarters was 11; while the percentage of families receiving charitable aid was 1.6. In the latter, however, no account was taken of help given by relatives or neighbors.

MEDICAL SERVICE.

It may not be deemed advisable to pay full compensation benefits but there appears to be no valid reason why adequate and unlimited medical service should not be furnished. Adequate medical treatment is absolutely essential to complete rehabilitation yet only 4 of the 40 State compensation laws (California, Connecticut, Idaho, and Porto Rico) require the employer to furnish unlimited medical services. Several laws make no provision for medical treatment whatever, and in others the low maximum limits make adequate treatment impossible.

The following table shows the medical service requirements of the several State laws classified as to length of time and maximum amounts for which the employer is liable:

LENGTH OF TIME DURING WHICH MEDICAL SERVICE IS FURNISHED, AND MAXIMUM AMOUNTS.

None.	2 weeks.	3 weeks.	4 weeks.	30 days.	weeks.	60 days.	90 days.	Unlimited as to time.
Alaska	Del. ($25)	Mich.	Iowa ($100)	Colo. ($100)	Ill. ($200)	N.Y.	Ky. ($100)	Cal.
Ariz.	Me. ($30)	Nebr. ($200)[1]	R. I.	Ind.	Kans. ($150).[2]		Minn. ($100)	Conn
N.H.	Mass.[1]	N. Mex. ($50)	S. Dak. ($100)				Nev.[1]	Hawaii ($150)
Wyo.	Mont. ($50)						Wis.[1]	Idaho.
	N. J. ($50)							La. ($150).
	Okla.[3]							Md. ($150).
	Pa. ($25)							Ohio ($200).[5]
	Tex.[4]							Oreg. ($250).
	Vt. ($100)							P. R.[6]
								Utah ($200).[7]
								Wash.[8]
								W. Va. ($150).

[1] Longer period under certain conditions.
[2] 50 days.
[3] 15 days.
[4] 2 weeks additional in hospital cases.
[5] Except in unusual cases.
[6] Necessary medical attendance as prescribed by commission.
[7] Such medical service as employer or insurer may deem proper.
[8] Employees contribute one-half.

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INJURIES COVERED.

No State holds the employer liable for every injury received by the employee. As a rule, the injury must have been received in the course of the employment and must have arisen out of the employment; usually, also, injuries due to the employee's intoxication, willful misconduct or gross negligence, and occupational diseases are not compensable. Thirty States withhold compensation if the injury is caused by the willful intention of the employee to injure himself or another; 27 deny compensation if the injury is due to intoxication; 13 if caused by willful misconduct; 9 if the employee is guilty of violation of safety laws or removal of safety devices; 9 if the injury is intentionally inflicted by a fellow employee or other person; and one if the injury is caused by an act of God. The exclusion of occupational diseases, however, from the category of compensable injuries is of much greater importance. California, Hawaii, Massachusetts, and the Federal Government are the only jurisdictions awarding compensation for such industrial diseases.

INSURANCE.

Security of compensation payments is reasonably assured if the employer is required to insure his risk in an authorized insurance company or State fund or, in the case of self-insurers, to furnish adequate security. Five of the 40 compensation States (Alaska, Arizona, Kansas, Louisiana, and Minnesota) do not require the employers to insure. Practically the only security possessed by the employees in these States is the provision making compensation payments preferred claims against the property of the employer.

ADMINISTRATION.

Thirty compensation States have commissions or boards to administer the compensation acts, with power to settle disputes and make awards. In the other 10 States [1] disputed cases are adjudicated by the courts. In Minnesota and New Jersey, however, the departments of labor are given limited supervision over the acts and are authorized to aid in the adjustment of disputes but possess no power to make awards.

The need of authoritative agencies to administer compensation laws is sufficiently demonstrated in those States which do not possess them. The average non-English-speaking foreign workman is frequently unfamiliar with his rights under the law and does not know what action to take in case of injury. Complaint, too, is frequent that the fear of discharge acts as an effective deterrent in demanding compensation. The original Nebraska compensation act did not

[1] Alaska, Arizona, Kansas, Louisiana, Minnesota, New Hampshire, New Jersey, New Mexico, Rhode Island, and Wyoming.

provide for an administrative commission but such a commission was established in 1917. The labor commissioner of Nebraska in referring to the operation of the compensation law said:[1]

> The delay and expense, the unequal footing of the parties in the courts, and unfamiliarity with and inherent fear of court procedure, all operate to defeat the very purpose of a compensation law.

The commissioner of labor of Kansas, for similar reasons, recommends that an administrative compensation commission be provided for that State.

The situation in New Jersey is much the same. A further illuminating side light upon the operation of the law in this State is shown by the relatively small number of compensable accidents reported. This is brought out by a comparison of the Massachusetts accident statistics with those of New Jersey. Both States require all employers to report their accidents. In Massachusetts there were reported 28,060 accidents resulting in death or two weeks' disability during the year 1916, while only 8,611 such accidents were reported in New Jersey. Thus, although New Jersey has 78 per cent as many employees as Massachusetts only 31 per cent as many accidents were reported.

MAKING OF RATES FOR WORKMEN'S COMPENSATION INSURANCE.

Perhaps no phase of workmen's compensation insurance is more important or complex than the principles and practices of rate making. A critical analysis of these principles and processes has just been made by Mr. E. H. Downey, special deputy, Pennsylvania Insurance Department, in an article appearing in the Journal of Political Economy.[2]

All insurance rates are made up of two factors: The "pure premium," or actual cost of benefits insured, and the "expense loading," or cost of insurance management.

Probably the greatest obstacle to the formulation of scientific insurance rates is the lack of accurate data as to compensation costs, therefore necessitating the introduction of conjectural factors.

> The rates must be "prospective," and they must cover the full ultimate cost of the benefits insured against. * * * The pure premiums of competitive insurers, accordingly, are not the actual payments made, or even the actual costs incurred, during an insurance year, but the *expected* cost to be incurred within the period covered by the insurance contract. This expected cost is perforce estimated in advance of the insurance period and on the basis of past experience. Two elements of uncertainty are thereby at once introduced into the calculation. (1) The past, even the recent past, never exactly prognosticates the future. Not only are industrial

[1] Report upon the operation of the workmen's compensation law for the year ending Nov. 30, 1915, p. 14.
[2] E. H. Downey: The making of rates for workmen's compensation insurance. The Journal of Political Economy, December, 1917, pp. 961-983.

equipment, methods, and personnel forever changing, with consequent changes in the number and severity of work accidents; accident rates apparently are affected also by economic cycles of depression and prosperity. In many, if not most, industries changes in technique and personnel are so rapid that accident experience may be said to become obsolescent in five years' time, while cycles of business activity are so unpredictable that the experience of a series of favorable years may come to be applied to a year of abnormal risk, and vise versa. (2) For the reasons just stated it is only the experience of the recent past which can safely be relied on for rate-making, and the experience of the recent past always contains a large element of more or less uncertain future payments.

The large proportion of "outstanding" to total incurred cost would not seriously complicate the determination of pure premiums if the outstandings themselves could be accurately ascertained. Unhappily this is not the case. The cost of recent claims is uncertain because many cases of apparent temporary disability will develop into death or permanent disability. Even with respect to known fatal and permanent cases valuation is no easy matter. The present value of future payments for these cases is affected by both mortality and remarriage, neither of which factors can be satisfactorily measured from existing data.

Thus far it has appeared that compensation insurance rates are projected into the future upon the basis of past pure premiums which, in the nature of the case, will never be exactly reproduced by the future period to which these projected rates apply and which can not be accurately determined even for the past period from which the pure premiums are derived. The errors arising from both these sources are immensely aggravated by the subdivision of experience into industry classes. Some 1,500 of such industrial risk classes have grown up, for each of which a pure premium is to be established ostensibly on the basis of its own experience. Another difficulty arises because of the fact that American compensation laws are State, not national, in scope. Both the legal benefits and the spirit in which the laws are administered differ widely from State to State, and even from time to time within the same State, so that experience had under one jurisdiction or under one benefit scale can not directly be applied to any other. The 1,500 risk classes must accordingly be further split up into 30 or more State units.

Various attempts have been made to overcome the deficiency of exposure in the ultimate risk classes by grouping related classifications and by combining the experience of different States in the same classifications. Both methods enlarge the exposure at a more or less serious cost of homogeneity and thereby of dependability. The author discusses in detail the principles of combination in the two cases. For the purpose of reducing to a common denominator the pure premiums incurred under dissimilar benefits, rate-making committees have relied upon law differentials. The law differential, in this sense, is the ratio between the computed ultimate cost of compensation for 100,000 accidents in a hypothetical standard distribution (Rubinow Standard Accident Table) under the given scale of

benefits and the computed ultimate cost of the same accidents under the Massachusetts act of 1912. It is pointed out, however, that a flat law differential rests upon an assumption which is clearly contrary to fact—the assumption, namely, that the distribution of severity of work injuries is the same for all industries. A corrective for this uneven distribution may be had, however. This consists merely in the analysis of accident costs by severity of injury and the application of an appropriate differential to each injury group—deaths, permanent total disabilities, permanent partial disabilities, temporary disabilities. The difficulties in ascertaining accurate and reliable basic and State pure premiums are summarized by the author as follows:

The combined effect of prospective rates, full reserve premiums, over-refined risk classes, and flat State differentials, is to introduce a large measure of conjecture into the most fundamental of all rate-making data—the actual cost of insured benefits per unit of exposure. The basic pure premiums do not truly represent the reported experience and scarcely deserve the reliance actually placed upon them by rate-making committees. What is scarcely less serious, the reported experience itself even if correctly translated, is not a sufficient basis for prospective insurance rates, because (*a*) the exposure on many risk classes is wholly inadequate, (*b*) the outstanding liabilities may not have been correctly estimated, (*c*) the reported experience may not have covered the precise range of business which the risk class is intended to describe, and (*d*) the experience relied on may relate to a period of greater or less industrial activity, or of more or less effective accident prevention than that for which the rates are projected. Hence, in the actual process of rate-making, the calculated basic pure premiums are more or less modified by judgment, and a number of more or less conjectural loadings are introduced into the State multipliers.

The basic pure premiums, finally, whether selected or calculated, are translated into State pure premiums by means of multipliers which rest as much upon judgment as upon ascertained fact. (*a*) The least disputable of the factors entering into these multipliers are the State law differentials whose weaknesses were adverted to in another connection. (*b*) The law differentials themselves are graded in accordance with the age of the act in question, upon the theory that the cost of compensation progressively increases during the first few years' experience as accident reporting improves and workmen become better educated to their legal rights. (*c*) In the last rate revision, moreover, account was taken of the fact that the experienced pure premiums were derived from several years of normal or even subnormal industrial activity, whereas rates were to be projected for a period of unparalleled expansion. It was commonly believed that the excessive loss ratios indicated by immature experience for 1916 were somehow correlated with this sudden expansion of industry. There was no conclusive evidence of such correlation, much less any quantitative measure of increased accident cost per unit of pay roll, but the prevailing belief was borne out by certain partial tests and by the common knowledge that the speeding up of industry means more crowded plants, more driving of workmen, more overtime, a greater number of inexperienced employees, and less attention to accident prevention. On this somewhat dubious basis, then, a loading of 15 per cent was incorporated in the basic pure premiums to offset the supposed effect of increased industrial activity. (*d*) Logically antedating all the foregoing factors is an allowance of 2 per cent in the basic pure premiums themselves for underestimate of outstandings in the reported losses. It is doubtful whether any allowance under this head is justifiable in face of the sub-

stantial judgment loading already referred to; in any case, the percentage fixed upon implies a degree of accuracy in the determination of pure premiums which has not been, and is not likely to be, realized.

The author also analyzes the factors of expense and profits loading, catastrophe hazard, and concludes with a discussion of existing rate-making organizations.

REPORT OF NEW JERSEY COMMISSION ON OLD AGE INSURANCE AND PENSIONS.[1]

In a report submitted to the governor of New Jersey in November, 1917, the commission on old age insurance and pensions, originally authorized in 1911, makes a strong recommendation for the passage of a workmen's health insurance bill adapted to New Jersey's needs. In the opinion of the commission, the conditions in the industrial world as affecting particularly the laboring class, since the United States entered the war, have accentuated the need for health insurance legislation, for it is imperative that the thousands who are entering industry for the first time, especially women with their greater susceptibility to sickness and with maternity functions to be considered, may enjoy the protection that comes with adequate health insurance legislation. As between provision for conserving the health of the people and making pension allowances to take care of the problem of old age poverty, the commission believes that "sickness, care, and prevention will assure greater returns to the State in the improved health and welfare of its citizens than a measure providing for the care of the aged." With this in mind the report deals primarily with a consideration of the sickness problem and measures for meeting it.

A survey of Trenton made in October, 1915, showed that 3.1 per cent of all persons 15 years of age and over were sick, and that 2.4 per cent of all persons were so sick that they were unable to work. Based upon these figures, the commission estimates that in New Jersey sickness causes an annual loss of 7.2 working days to persons 15 years of age and over, and that there are at all times 43,000 persons of 15 years and over who are so sick as to be unable to work. Further data is given showing that "New Jersey can not consider her health conditions satisfactory."

The close relation of industry to sickness is dwelt upon, especially the prevalence of occupational diseases among workers in potteries, smelters, tanneries, and the textile and hatting trades where lead poisoning and mercury poisoning and consumption, pneumonia, and other ailments induced by work in dust or humid atmosphere are

[1] Report on health insurance by the New Jersey Commission on Old Age Insurance and Pensions. Rahway [1917]. 20 pp.

found. It is also pointed out that wages have been so low that many wage earners and their families have not been able to obtain a sufficient income to permit a healthful standard of living, thus emphasizing what has been found to exist in many countries—a partnership between poverty and disease. Low wages of course have not permitted the accumulation of savings to provide against possible sickness. In 1,412 family problems which the bureau of associated charities of Newark undertook to solve during the year 1916, 42 per cent were needy because of sickness, not including disabilities due to industrial accidents nor such disabilities as arise from insanity, epilepsy, etc.

Taking up the matter of methods of insurance, the report notes briefly that stock companies "are expensive and few in number," that mutual sickness benefit associations, while saving the heavy overhead costs of commercial insurance, are likewise few in number, only 20 being found among New Jersey's 3,000 factories, and that the fraternal organizations are issuing very few exclusively sickness policies. They "fail to meet the situation satisfactorily, since they do not provide the kind of medical care needed and their rates, unfortunately, are frequently inadequate to provide permanently for the expected benefits." As to the trade-union benefit plan it is stated that "in a State which is less than one-quarter unionized, and where but few of the unions grant sickness benefits, and few, if any, grant medical benefits, the trade-union funds can not be expected to develop immediately into a comprehensive system to cope constructively with sickness, care, and prevention as demanded by the present emergency."

The report outlines briefly the provisions of sickness insurance plans in Europe and quotes from the reports of the United States Public Health Service, the Commission on Industrial Relations, and the Social Insurance Commission of California, to show the trend toward social insurance of this character. The attitude of various trade-union organizations in New Jersey, favoring the proposition, is noted; also the fact that industry is evidencing a desire to prevent time loss on account of sickness. Thus, an official of a large company employing thousands of workers, after a careful study of working time lost on account of both sickness and accidents, has said:

> As in the case of accidents, when the man is absent another man must be supplied to take his place, and this increases both the labor turnover and the accident rate; in other words, it is a source of considerable loss to the company as well as to the man. * * * Health insurance is now being urged in many quarters, and if it comes about we may expect a transfer of emphasis from accident to illness prevention.

The commission is of the opinion that health insurance is a measure which gives great promise both of relieving economic distress due to

sickness and of stimulating preventive action, and that to achieve these ends such a measure, adapted to New Jersey's needs, should be based on the following fundamental principles:

Existing health insurance agencies that are conducted on an adequate basis at actual cost should, with mutual management, be utilized in the further development of a comprehensive health insurance system. In order that the greater effectiveness and economy of a universal system may be enjoyed, health insurance should be made to cover all regularly employed wage earners. Insurance should provide medical care and health instruction in order that its work may be both curative and preventive. To minimize the financial distress attending sickness the system should provide a cash benefit during temporary incapacity for work. It should also provide maternity care to meet the special needs of working mothers. Health insurance should be democratically supported and managed by those directly concerned, the State bearing as its share the cost of general administration as it does in workmen's compensation. The system should be under supervision of a special bureau in the Department of Labor with competent medical direction and in close cooperation with existing public health agencies, in order to place added emphasis upon the extremely important problem of sickness prevention.

LABOR LAWS.

COMPULSORY WORK LAW OF NEW JERSEY.

Following the example of the legislature of West Virginia (see MONTHLY REVIEW, August, 1917, p. 350) and of Maryland (MONTHLY REVIEW, September, 1917, p. 525), a compulsory work law was enacted by the recent legislature of New Jersey as a war emergency measure. In its substantive features the New Jersey act more closely resembles that of Maryland than that of West Virginia, its scope being the same, i. e., able-bodied male residents of the State between the ages of 18 and 50 years, while the West Virginia law includes those between the ages of 16 and 60. Like the Maryland law, provision is made for employment on public works. Thirty-six hours per week is the minimum period of labor required, and maximum penalties are fixed at $100 fine or three months imprisonment, or both. The possession of property or income is not a defense, nor is the claim of inability to obtain work, in the absence of a certificate from the commissioner of labor that proper application has been ineffectually made. The common wage in the occupation must be paid, and where inability to secure private employment appears, assignment and reassignment as necessary will be made to undertakings carried on by the State or any county or municipality thereof, or by private employers who accept the services of such persons.

The act is to be in effect whenever the governor of the State shall issue a proclamation determining general employment to be necessary and essential for the protection and welfare of the State and the United States. Law enforcement officers in general are charged with the duty of enforcing this law, while the commissioner of labor is authorized to appoint or employ, subject to the civil service provisions of the State, such employees as may be necessary to aid in carrying out the provisions of the act. Exemptions are made of persons temporarily unemployed on account of labor disputes, bona fide students during the school term, and persons fitting themselves to engage in trade or industrial pursuits. The act was approved February 15, to take effect immediately.

HOUSING AND WELFARE WORK.

HOUSING FOR WAR NEEDS BY THE DEPARTMENT OF LABOR.

Under a bill recently introduced in the House of Representatives (H. R. 10265) the Department of Labor is provided with a fund of $50,000,000 with which to undertake the housing of workers engaged on work essential to the conduct of the war. The Secretary is authorized to acquire by purchase, lease, condemnation proceedings, or otherwise, such improved or unimproved land as he may consider necessary for the purposes in question. Authority is given to equip, manage, and maintain, alter, rent, lease, exchange, sell, and convey any such lands, houses, buildings, improvements, parts thereof or interest therein; and to aid in providing housing facilities by loans of money to any firm, persons, or corporation upon such terms or conditions as he may determine. The Secretary of Labor is also authorized to acquire by purchase or otherwise transportation and community facilities in connection with the housing undertakings.

The bill provides that the houses erected by the Government shall, whenever practicable, be of a temporary character. The services of the Supervising Architect of the Treasury in connection with the work are to be utilized whenever practicable.

In leases of land by the Government a clause is to be inserted for an option of purchase for an agreed price in each case.

No work under the terms of the bill shall be done under any percentage or "cost-plus" agreement, and full and complete itemized reports of all transactions in connection with the work shall be made to Congress at the beginning of each session, and a final report is to be made immediately after the declaration of peace.

While all authority to project new housing schemes under the bill terminates upon the conclusion of peace, power and authority to care for and rent property remaining undisposed of and to conclude and execute contracts for the sale of property made during the War are to continue until such period after the War as the Secretary of Labor may determine.

The necessity for the proposed legislation in question is thus set forth by the House Committee on Public Buildings and Grounds, which submitted its report on February 28.

The necessity for this legislation arises from the fact that all of the manufacturing and industrial plants existing in this country at the time of the declaration of war with Germany which could be useful for war purposes have been enormously expanded

and in addition very many more such plants have been established, and this expansion and growth have made it necessary that many, very many, thousands of additional workmen should be employed, and of course these workmen and their families must be housed. The administration, realizing and appreciating the fact that it was of the very highest importance that every plant engaged in the manufacture of arms and munitions and other war essentials should be expanded to the utmost, and should be kept constantly running at its highest productive capacity, and that this of necessity would require a tremendous increase in the number of industrial workers, caused the Committee on Labor of the Council of National Defense to make a survey of the problem in order to determine what could be done in the premises. This investigation disclosed an alarming condition. It was ascertained that good, skilled, competent workers could be had, but that in many cases houses could not be had, and therefore this vitally necessary work could not be performed as speedily as the exigencies of the situation demanded. Private capital could not or would not build on a scale to meet the demand, and therefore it became a governmental problem to house the labor which is absolutely necessary for the full development of our resources to successfully deal with the emergency confronting us.

* * * * * * *

Necessarily legislation of this character must lodge very broad discretion with those who are to administer it. It is a temporary expedient, and entirely new to our Government, and * * * can only be justified by the conditions now existing, but those conditions seem to us to imperatively demand its enactment.

HOUSING AND THE LAND PROBLEM.

The secretary of the committee on new industrial towns (New York City) in an article in the January, 1918, number of the Journal of the American Institute of Architects discusses the relation of the unearned increment in land to the problem of housing wage earners, and outlines a plan for the conservation of land values in housing developments which may be undertaken by the Government as a war emergency measure.[1]

The housing problem is essentially a land problem, it is stated, and "no real solution of the problem of getting the vast majority of our population into attractive homes is possible unless we first solve the problem of the unearned increment which now banks up in front of economic progress, including housing progress, like snow before a snow plow." The growth of this unearned increment in land in two large company towns is cited. In Lackawanna, N. Y., the increment created by the Lackawanna Steel Co. has been placed at $6,788,000; in Gary, Ind., at $22,358,900.[2]

The way of escape from the evils of increasing land values lies in diverting those values to community uses through community land ownership. "The medium may be a nonprofit land company, the

[1] What is a house? By Richard S. Childs. Journal of the American Institute of Architects, Washington, D. C. January, 1918.

[2] These data are the results of studies made for the committee on new industrial towns, of which Mr. Lawson Purdy, of New York, is chairman.

conduct of which the future tenants may control—a private government, so to speak; or the Government. Either might earn a surplus but would have nothing to do with it save to distribute it in some kind of services among the tenants."

In the case of an employer contemplating the erection of a company town for his employees the method of procedure is outlined as follows:

The company should buy land enough for the plant and the town, too, create a nonprofit land company, sell it the town site, and accept in return its first-mortgage bonds. The land company should plan the city, pave it, provide water and other utilities, stake out the building lots, determine which shall be business streets and residential streets, and establish a minimum cost of buildings in the various districts to protect the land values. It should lease, not sell, the land, fixing the rentals at a figure sufficiently low to keep the workers from going outside the tract to find homes. Unless the size of the future population can be definitely foreseen, rentals of business frontages should be adjusted every five years, to correspond with the growth of the population or, perhaps, of the factory pay rolls. Residential rentals could be made for fairly long terms—say 15 years—since such land values, even in a rapidly growing town, do not necessarily alter much. The employer, if it be destined to remain a one-industry town, would have to become a partner in housing operations in some round-about way, such as financing a building and loan association or helping with the financing of a housing corporation, in case private capital proves timid about building on leased land.

If the Government proposes to house munition and shipyard workers the plan of procedure would be the same in every way:

Let our Government create a housing corporation with an appropriation. Let it condemn the lands it needs, build the villages and cities that are required, and rent the houses during the war. Then, when the war industries have been readjusted to permanent peace conditions, let the Government write off the excess and emergency cost of its housing adventure as a cost of war and recoup the balance by selling the property, not to individuals but to local nonprofit land companies, to be operated for community revenue. Thus will be created communities that are the owners of their underlying lands, possessors of all present and future increments therein, and enjoying revenues a hundred per cent above those of ordinary towns of equal size.

The author estimates on the basis of the studies made of Lackawanna, N. Y., and Gary, Ind., that 4 per cent on the enhanced land values would be enough in time to replace the principal investment and still leave twice as much for community purposes as would be obtained from normal taxation.

CONDITIONS IN OHIO LABOR CAMPS.[1]

The Industrial Commission of Ohio has recently issued a report of a preliminary survey covering living conditions in 108 labor camps containing a population of 7,172 at the time of the survey but having

[1] Preliminary survey of labor camps in Ohio. Bulletin of the Industrial Commission of Ohio. Vol. iv, No. 11. Department of Investigation and Statistics, Report No. 32. Columbus, Nov. 27, 1917. 22 pp.

a housing capacity of 11,349. The data in this report were collected in April and May, 1917, and cover 17 construction camps, 67 railroad camps, and 24 factory and mill camps. Although not stated, the inquiry appears to have been prompted by written and verbal complaints by laborers who have told of certain unsanitary features surrounding their mode of life or have referred to unfair contract or wage payment methods followed by proprietors. There was no attempt, it is stated, to make a study of wage and hour conditions or degrees of skill required for varying types of labor performed, the schedule providing chiefly for a sanitary survey.

The first important fact noted is the high percentage of labor turnover, indicated by the showing that in 39 camps, or 44.3 per cent of those for which information on this point was obtained, the laborers remained one month or less, and in 10 camps (11.4 per cent) the average length of residence was one day. It is intimated in this connection that a systematic practice of job selling,[1] indulged in by foreign "straw bosses" who can speak English and who victimize their fellow countrymen who can not speak English, is responsible for this high labor turnover.

Sleeping quarters were found to be greatly crowded, the beds being generally vermin infested, and the men being bunked under conditions which allow, on the whole, an inadequate per capita air space. For example, in railroad camps 2,877 men were allowed less than 300 cubic feet of air space each; only 100 were allowed over 500 cubic feet each.

The boarding service is furnished (1) by the companies, (2) by commissaries who bid for the concession, and (3) by the workmen themselves. In one-third of the camps inspected the board was furnished by commissaries. Charges for board were found to vary from $3 to $6 per week. The report does not comment on the quantity or quality of the food served but suggests considerable carelessness on the part of cooks and their helpers in the handling and preparation of the food. Washing facilities were in many instances not conveniently situated.

In commenting on the care of the sick the report states that the greater factory camps require physical examination and vaccination at the time of entrance and provide care during lost time resulting from both. Hospitals and contagious hospitals are provided with separate service for Negroes where any are employed. Construction camps carry their injured to a doctor or hospital but do not often assume much responsibility for the sick, while railroad camps sometimes send men home on paid transportation or to regular company

[1] This subject is dealt with more in detail in a report of the commission on "Job selling in industrial establishments in Ohio," which was noted in the MONTHLY REVIEW for October, 1916, pp. 1 to 5.

physicians. These camp laborers, it was found, are frequently attacked by pneumonia.

It seems to be the rule among these camps to withhold wages from one to two weeks. If a man is discharged he may secure his wages at once in most of the camps; if he quits he has to wait until the next pay day. Deductions from wages are made without itemization by 23 camps which require no receipt for the balance paid in cash, while 26 companies present slips showing total deductions and require signatures to same.

Based on the living conditions as found in these 108 camps, the report concludes with some definite suggestions by which sanitary conditions may be improved, bearing in mind the fact that perhaps 90 per cent of the camps are of a temporary nature, which makes it advisable to keep the financial burdens incident to improved conditions at a minimum. The suggestions are as follows:

General layout.—Well-drained site.

Water supply.—Satisfactory by frequent analysis. Sufficient in quantity. Stored in tightly covered receptacles from which drawn off by faucet.

Heat and light.—Sufficient to insure reasonable comfort.

Toilets.—One seat to 20 persons. Fly-proof construction. Sewer connections where available. In other cases containers emptied and cleansed regularly with lime, earth, ashes, crude oil, or other means of keeping down nuisance. Separate means designated by signs for use of women.

Kitchen and other wastes.—Covered metal containers for collection. Regular disposal by incineration, cesspool, burial, or as feed for chickens or hogs.

Stables.—At least 150 feet from other buildings. Frequent removal of manures or composting pits for their accumulation.

Bathing.—Provision in or near sleeping quarters of a place where warm water baths may be taken with reasonable frequence and privacy. Facilities for regular daily washing to be ample and in convenient location for use. Soap and towels to be furnished without charge.

Food supplies.—Screened storage places. Refrigeration for perishables. No goods open in stores to contamination.

Laundry.—Some means of to be provided in every camp.

Housing.—Floors must be kept in such repair that they may be kept sanitary. If built of wood, an under air circulation must be arranged. Roofs and sides must be rainproof. Windows and doors to be provided with screening and with necessary protection against intruders. No windows to be barred or fastened down in such a way as to prevent opening. Springs or coils for self-closing to be supplied on screen and other doors in all buildings.

No part partitions to be used in any new structures. Approximately 400 cubic feet of sleeping space to be allowed each person.

Separate dining and kitchen quarters to be maintained at a distance of at least 100 feet from sleeping quarters, wherever practicable. If both occur under same roof, means of communication between them to be kept carefully closed at all hours.

Bunks.—Preferably steel. No triple tiers except under unusually favorable conditions. Two-foot aisles between and not nearer than 1 foot to floors. No exchanges between men, and some number or tab system to prevent same.

Bedding.—Must be sufficient in quantity and in proper sanitary condition. Subject to destruction where found totally unfit for use. Where straw is used, it should be changed weekly.

Housekeeping practices.—Sweeping compounds should be used. Bunks and bedding and the cars or rooms in which they are kept should be thoroughly fumigated each week. Except in extreme severity of weather, windows in sleeping quarters and inside toilets should be kept open at both top and bottom at least four hours daily. Roller towels should give place to paper or other individual ones. Cooks and assistants should wear clean clothing while at work. Spittoons should be provided and kept cleanly.

Sickness.—Contagious disease should be at once reported to the proper authorities and patients so afflicted segregated until other arrangement is made. No person suffering from or convalescent from sickness to be allowed to handle foods.

Commissaries and company stores.—Discontinuance of practice of sleeping among supplies. Prices of all articles offered for sale to be plainly marked thereon. Itemized list of deductions to be rendered to workmen before statements of same are forwarded to paymaster.

Employment contracts.—Each laborer to receive written contract stating wage terms, transportation and other charges, and employment agency fee.

Central authority.—The responsibility for hygienic conditions and the justice of business practice in camps within the State shall be deemed to reside in those parties for whom the work is being done. No subletting of boarding, rooming, or other privilege shall alter this.

RURAL PLANNING AND DEVELOPMENT IN CANADA.

The commission of conservation of Canada late in 1917 issued the results of a study of rural conditions and problems in Canada by Thomas Adams, town planning adviser to the commission.[1] Social conditions in rural districts, land settlement policies, problems of the proper development and economic use of the land to secure the highest efficiency in industrial processes, health, convenience, and amenity are matters dealt with in the report. Consideration is also given to such specific problems as that, for example, of the settlement of returned soldiers and sailors upon the land. The study views the problems of land as fundamental and as closely related to the organization of labor and of the means of production.

Three reasons are pointed out for the prevalent uneconomic methods of using land:

First, the numerous ills caused by the holding of large areas of the best and most accessible land by speculators and the want of proper plans for the economic use and development of the land.

Second, the compelling social attractions and the educational facilities of the cities and town; and

Third, the lack of ready money and of adequate return for the labor of the farmer, because of want of cooperation, rural credit, and of facilities for distribution of his products. To secure any real improvement in rural life and conditions, we must try

[1] Commission of conservation, Canada. Rural planning and development; a study of rural conditions and problems in Canada, by Thomas Adams, town planning adviser, commission of conservation. Ottawa, 1917. 281 pp.; illus.; plates; plans.

to bring tracts of land held for speculative purposes into use, prepare development schemes of the land in advance of settlement, try to take part, at least, of the social and educational facilities of the cities into the rural areas, and simultaneously provide the cooperative financial and distributive conveniences that are necessary to give the farmer a larger share of the profits of production.

There are two tendencies developing in Canada which favor the practicability of the proposals suggested. First, there is the increase in the relative number of towns and villages in the rural districts where small manufacturing industries are springing up, and, second, there is the tendency of large manufacturers to move from large urban centers to rural and semirural districts. This process of industrial decentralization indicates the practicability of artificially promoting industrial village centers and rural industries. Unorganized, the movement of decentralization has meant harm to production, as it has been accompanied by the worst forms of speculation and bad sanitary conditions. "Properly organized, however, the movement should help to increase production by bringing consumer and producer nearer to each other, and if proper planning regulations were made and enforced, unhealthy land speculation and improper sanitary conditions in connection with these new developments would be prevented."

There has, however, been no proper planning of rural and urban areas in Canada. The present rectangular system of survey is not a method of planning land, but only a basis on which to prepare planning and development schemes. No stereotyped planning is adequate and regard must be had to the physical and economic conditions of the territory to which they apply, and all planning should be made for the general purpose of securing conditions of health, amenity, convenience, and economic use of the land. Such a system of planning requires adequate surveys and classification of the land.

Equally as important as land planning is the planning of roads and other transportation arteries.

Underlying the defects of methods such as the above are those conditions which favor speculation in land. Instances are cited from Canadian experience and that of other countries showing how speculation has caused absentee landlordism, idleness of fertile and accessible areas, and inflated land values, all of which in the long run tend to impair the value of real estate as an investment. It has also impaired the producing value of the land, withholding it from profitable agriculture, in the view of the report. Land speculation, too, has intensified the factors producing high prices and unemployment.

The report looks at the situation in a broad way and emphasizes the fact that while the planning of land for its proper use and development is important, to be effective in the accomplishment of results other measures must accompany it, as for example, improved edu-

cational methods, cooperation in production and distribution, rural credit system, and creation of rural industries. Altogether five principal problems require attention: First, improvement in national, provincial, and rural land policy and administration; second, making of rural surveys, preparation of details, topographical maps, and reports on rural conditions; third, proper system of planning land to serve the highest interests of health, convenience, and economic use; fourth, creation of agricultural and industrial settlements, free of artificial pressure and on sound economic lines: fifth, formulation of a policy of adjustment to conditions after the war, particularly in relation to the problem of the returned soldier.

Some of the more significant paragraphs concerning the suggestion to create agricultural and industrial settlements as a means to securing a greater comparative well-being may be quoted.

Agricultural and industrial settlements should be organized on carefully selected sites, suitable for development on sound economic lines.

Purely agricultural settlements should only be developed on fertile and improved land, having good transportation facilities and accessibility to markets.

New town settlements (garden cities) should be established where there are good facilities for profitable production and distribution, where manufacturing and intensive farming can be successfully carried on, and where advantage can be taken of the tendency to remove industries from crowded centers to rural districts or to establish new industries near water powers and raw materials.

Government capital or the guarantee of bonds should be made available for these settlements and should be made repayable at a fixed annual rate to cover principal and interest; the benefit of all profits derived in excess of that rate should be spent on improving the settlements.

The increment of land values created by the conversion of cheap agricultural land into a valuable town site gives to the garden city class of development a special financial stability which is not possessed by the agricultural settlement.

For the purposes of agricultural settlements, a county, or counties, in old territory and a few townships in new territory should be taken and an attempt made to apply the best kind of organization and scheme of development that can be devised for each. The capital provided for such schemes should be ample in amount, but as little as possible of it should be given in the nature of a subsidy. A properly conceived scheme should pay its way.

The recommendation that industrial, or partly industrial and partly agricultural, town settlements be established is apt to be regarded with suspicion by practical men because of its novelty. That novelty has now worn off in England and garden cities and suburbs are no longer looked upon as visionary schemes.

One of the main objects in carrying out the suggestion to create combined agricultural and industrial settlements would be to provide opportunities for the employment of returned soldiers in varied kinds of productive enterprises in both rural and urban areas.

These settlements would also be invaluable as a practical demonstration of town building and land development. Social progress in England during the last 15 years has been greatly influenced as a result of the one experiment in industrial development and housing which has been carried on at Letchworth.

Before initiating any comprehensive policy to establish new centers of population it might, however, be more prudent to begin by developing one new manufacturing and agricultural town, where systems of rural and urban land development could be tried out, where opportunities for varied kinds of employment could be provided, where the strength and weakness of different methods could be tested, and where there could be evolved, by a process of practical experience, the soundest economic principles on which development should be guided in the future.

HOUSING SHORTAGE IN GERMANY.

Two extensive inquiries on the housing question in Germany were made during the past year, one by the imperial statistical office (division for labor statistics),[1] the other by the Central Welfare Bureau,[2] of Berlin. These two investigations show that there is an actual shortage of housing accommodations in Germany and that this shortage will probably be aggravated after the War.

The survey made by the imperial statistical office shows a considerable decline in building activity, as brought out in the following table:

BUILDING ACTIVITY IN 45 CITIES IN GERMANY.

Year.	Number of houses built.	Number of apartments in the houses.
1912	9,507	64,107
1913	7,581	47,817
1914	6,286	34,475
1915	2,589	13,646
1916	1,009	5,015

These figures show that in 1916 only one-ninth as many houses were built as in 1912 and only one-twelfth as many apartments. Generally speaking, only in cities such as Essen, for example, where the conditions created by the War necessitated immediate extension of housing accommodations, has there been any considerable number of new houses erected.

The report of the imperial statistical office is based on inquiries made of 91 cities of over 50,000 inhabitants each. In 64 of these cities the net increase in houses in 1916 is considerably less than in 1915. In the matter of small dwellings 33 cities sent in returns suitable for comparison, and of these, 4 show an increase and 29 a decrease in the number of such dwellings as compared with 1915.

The survey further reveals a considerable decrease in the number of unoccupied dwellings resulting from increased pressure upon housing accommodations.

[1] Reichs-Arbeitsblatt. Supplement 14. Beiträge zur Wohnungsfrage während des Krieges. Berlin, 1917.

[2] Concordia. Zeitschrift der Zentralstelle fur Volkwohlfahrt. Berlin, 1917. Vol. 24, Nos. 14, 15, 17, 18.

Of 34 cities sending in returns which can be compared with those of former years, 7 show an increase in the number of unoccupied dwellings, but 27, on the other hand, a decrease. According to these statistics the highest percentages of unoccupied small dwellings are shown by the following cities: Aix-la-Chapelle, 8.2; Altona, 6.8; Barmen, 6.7; Berlin, 6.2; Hamburg, 6.1; Augsburg, 5.7; Frankfort on the Main, 5.3; Crefeld, 4.6; Recklinhausen, 4.6; Buer, 4.5; Bonn, 4.3; Dusseldorf, 4.3; Neukoln, 4.0. The lowest percentage of unoccupied small dwellings was shown by much the same towns as had the lowest percentages of unoccupied dwellings of all kinds, viz, Essen, 0.2; Erfurt, 0.2; Kiel, 0.3; Brandenburg, 0.3; Lubeck, 0.5; Königsberg, 0.6; Stettin, 0.7; Magdeburg, 1.0; Karlsruhe, 1.2; Muhlheim on the Ruhr, 1.2; Ludwigshafen, 1.2; Linden, 1.4; Hildeshein, 1.4; Halle, 1.5; and Bremen, 1.7.

The statistical office sums up the results of its inquiry in these words: "In contradistinction to the first two years of the War the number of unoccupied dwellings has decreased in the great majority of cities, so that 1916 has witnessed a complete and sudden change in the development of the housing situation. While there is no reason whatever to fear a general shortage of dwellings after the War, the situation is nevertheless very unfavorable in an extraordinarily large number of communities, and the danger of a grave scarcity of dwellings must not be underestimated."

A census of unoccupied dwellings conducted in 1916 in Westphalia by the Westphalian Small Dwellings Association tends to show that in the case of four-room dwellings the danger of scarcity is the greatest. The imperial statistical office comments on that inquiry as follows: "Though it is true that there is no danger of a general scarcity of dwellings after the War, nevertheless, in a large number of communities in Westphalia, the situation requires careful watching, and in several communities there is great probability of a scarcity of small dwellings after the War."

These results are confirmed by the report of the Central Welfare Bureau of Berlin, based upon replies from 809 cooperative building societies. The percentage of building societies reporting that even at the present time there is a scarcity of small dwellings is between 35 and 45 per cent, and it must be borne in mind that the figures given by these societies are based on experiences in the larger cities. Especially in cities of more than 100,000 inhabitants a scarcity of small dwellings is reported to be existing. About 60 per cent of the building societies anticipate a scarcity of small dwellings after the War. Furthermore a large number of those societies which deny the present existence of a scarcity of dwellings expect such a scarcity after the War. Especially in towns of from 50,000 to 100,000 inhabitants and over, a dearth of small dwellings is expected by over 90 per cent of the societies reporting.

INDUSTRIAL ACCIDENTS AND DISEASES.

TREND OF ACCIDENT RATES IN THE IRON AND STEEL INDUSTRY TO END OF 1917.

In the MONTHLY REVIEW for November, 1917 (pp. 13-22), were published tables and comment showing the trend of accident frequency in the iron and steel industry from 1913 into the period of war activity in 1916 and 1917.

It is now possible to extend these tables to the end of 1917. They are accordingly here presented. Complete tables and discussion will appear in Bulletin 234, now in press.

TABLE 1.—FREQUENCY RATES OF FATALITIES AND OF ALL ACCIDENTS IN THE IRON AND STEEL INDUSTRY, DECEMBER, 1913, TO DECEMBER, 1917.

Year ending with—	Number of 300-day workers.[1]	Fatalities per 1,000 300-day workers.	Total accidents per 1,000 300-day workers.
December, 1913	153,098	1.34	181.0
March, 1914	146,522	1.29	168.4
June, 1914	137,816	1.09	154.7
September, 1914	128,023	.81	138.9
December, 1914	117,214	.70	130.4
March, 1915	111,881	.63	118.0
June, 1915	111,794	.65	114.0
September, 1915	117,933	.85	118.6
December, 1915	133,627	.86	124.5
March, 1916	148,221	.96	131.8
June, 1916	160,819	1.09	134.1
September, 1916	168,790	1.02	135.5
December, 1916	175,013	1.11	133.2
March, 1917	178,937	1.15	128.5
June, 1917	182,587	1.08	121.6
September, 1917	185,445	1.11	110.9
December, 1917	186,357	.98	103.4

[1] A 300-day worker is the equivalent of one who works 10 hours per day for 300 days.

TABLE 2.—FATALITY RATES IN PLANTS PRODUCING SPECIFIED PRODUCTS, DECEMBER, 1913, TO DECEMBER, 1917.

Year ending with—	Fatality rates per 1,000 300-day workers in plants producing—					
	Fabricated products.	Sheets.	Wire products.	Tubes.	Miscellaneous steel products, group A.	Miscellaneous steel products, group B.
December, 1913	0.62	0.70	0.86	0.58	1.84	1.50
March, 1914	.64	.78	.61	.51	1.86	1.48
June, 1914	.57	.59	.31	.50	1.77	1.22
September, 1914	.49	.44	.24	.45	1.30	.83
December, 1914	.49	.20	.04	.45	1.21	.87
March, 1915	.56	.27	.09	.43	.89	.95
June, 1915	.60	.38	.27	.38	.67	1.34
September, 1915	1.05	.43	.47	.57	.82	1.44
December, 1915	1.01	.48	.48	.55	.88	1.42
March, 1916	1.07	.58	.71	.53	1.11	1.12
June, 1916	1.09	.64	.76	.48	1.42	1.22
September, 1916	1.01	.60	.68	.35	1.45	1.11
December, 1916	1.17	.65	.83	.33	1.63	1.19
March, 1917	1.11	.60	.89	.33	1.63	1.33
June, 1917	1.29	.51	.76	.40	1.44	1.33
September, 1917	1.17	.61	.78	.36	1.57	1.52
December, 1917	1.09	.42	.64	.41	1.35	1.44

TABLE 3.—TREND OF ACCIDENT FREQUENCY RATES DECEMBER, 1913, TO DECEMBER, 1917, IN PLANTS PRODUCING SPECIFIED PRODUCTS AND ON INDUSTRIAL RAILWAYS.

Year ending with—	Frequency rates per 1,000 300-day workers in plants producing—							
	Fabricated products.	Sheet.	Wire.	Tubes.	Miscellaneous steel products, group A.	Miscellaneous steel products, group B.	Total for specified products.	Industrial railways.
December, 1913	300.9	184.9	177.9	81.5	212.8	123.1	181.0	.....
March, 1914	263.6	173.0	159.4	67.4	205.8	116.7	168.4	.....
June, 1914	226.6	161.0	152.9	57.2	188.3	100.0	154.7	.....
September, 1914	189.5	142.1	143.9	45.0	167.1	88.1	138.9	.....
December, 1914	176.9	141.5	138.6	37.5	152.0	82.7	130.4	.....
March, 1915	164.9	135.4	131.0	30.7	130.4	81.3	118.0	.....
June, 1915	153.6	125.3	132.9	26.1	128.1	69.9	114.0	.....
September, 1915	156.7	115.5	149.8	30.0	140.3	61.3	118.6	.....
December, 1915	160.4	111.8	157.2	32.3	155.8	69.0	124.5	106.4
March, 1916	158.3	111.8	159.9	34.9	179.3	75.9	131.8	117.5
June, 1916	163.6	109.4	156.5	36.7	188.2	81.0	134.1	131.5
September, 1916	160.4	107.2	149.2	36.7	200.1	86.2	135.5	145.9
December, 1916	156.2	102.0	144.5	37.1	202.7	84.6	133.2	153.9
January, 1917	158.7	102.3	141.4	36.1	201.5	82.1	131.7	155.7
February, 1917	159.3	100.9	139.1	36.2	199.6	79.7	130.1	157.5
March, 1917	161.9	99.4	136.6	35.6	196.4	78.5	128.5	157.1
April, 1917	162.8	96.8	135.1	34.8	193.9	77.4	126.7	156.2
May, 1917	161.9	96.5	132.6	34.6	190.9	76.0	124.7	157.8
June, 1917	159.8	97.0	127.7	34.6	186.7	73.4	121.6	157.3
July, 1917	159.2	100.8	123.0	33.2	180.5	70.6	118.2	153.7
August, 1917	158.2	104.6	118.6	32.2	173.7	67.5	115.0	153.7
September, 1917	158.1	102.5	111.5	31.7	167.4	65.4	110.9	150.5
October, 1917	157.6	102.7	108.1	31.2	162.6	63.1	108.6	147.6
November, 1917	159.5	101.5	101.7	30.8	158.8	61.9	105.9	146.6
December, 1917	154.0	101.7	97.5	30.5	154.0	61.4	103.4	146.9
NUMBER OF 300-DAY WORKERS.								
June, 1914	8,817	16,841	25,575	19,944	41,744	18,922	137,816	.....
June, 1915	6,706	15,759	22,434	13,329	35,670	13,477	111,794	[1] 12,240
June, 1916	8,276	21,906	31,377	21,031	45,673	23,000	160,819	[1] 16,690
June, 1917	10,110	25,504	32,928	24,880	49,893	27,046	182,587	[1] 17,740

[1] December.

INDUSTRIAL ACCIDENTS IN MASSACHUSETTS.

One outstanding feature of the Fourth Annual Report of the Massachusetts Industrial Accident Board for the year ending June 30, 1916,[1] recently issued, is the large increase in the number of accidents reported to the board during the year as compared with each of the three preceding years that the compensation act has been in force. During the fourth year the number of nonfatal injuries was 135,257—an increase of 43 per cent over the third year and of 50.8 per cent over the first year of the act. The number of fatal accidents reported was 463, or an increase of 25.1 per cent over the number reported during the preceding year. In classifying these injuries the board has changed the policy followed in previous years by adopting the definition of tabulatable injuries recommended by the Inter-

[1] Massachusetts. Industrial Accident Board. Fourth annual report, including statistical information and tables on the experience for the year, a comparison of frequency and nature of injuries for four years, and general information on different phases of the compensation act. July 1, 1915, to June 30, 1916, inclusive. Public document No. 105. Boston, 1917. 272 pp. Illustrated.

national Association of Industrial Accident Boards and Commissions,[1] and the statistics in the current report are presented accordingly. This definition is as follows:

> All accidents, diseases, and injuries arising out of the employment and resulting in death, permanent disability, or in the loss of time other than the remainder of the day, shift, or turn on which the injury was incurred should be classified as "tabulatable accidents, diseases, and injuries," * * *

Under this definition, 67,717 nonfatal and 463 fatal accidents are tabulated, the number of nonfatal accidents being an increase of 37.1 per cent over the number of tabulatable injuries during the preceding year. Of the 67,717 nonfatal injury cases, 61,116 persons (90.3 per cent) were employed by employers carrying compensation insurance, and of the 463 fatal cases, 366 (79 per cent) were employed by employers carrying compensation insurance.

Taking up the fatal accidents, the following facts appear in the report: The largest number, 30.7 per cent, occurred in road, street, and bridge transportation, while classified by causes the largest number, 18.6 per cent, was due to falls. In about 64 per cent of the fatalities dependency was total within the meaning of the compensation act, while in 17.3 per cent there were no dependents. Most of those who died, 279, or 60.3 per cent, were married, and the greatest frequency was in the age groups 21 to 29 and 40 to 49 (22.5 per cent and 22.9 per cent, respectively). Returns from insurance companies transacting compensation business indicate that payments were made in 340 fatal cases, the compensation paid and outstanding in such cases being $885,040.48. The same returns indicate total medical payments amounting to $834,804.52, but how much of this is chargeable to fatal cases is not shown.

A somewhat different showing is made both as to industries affected and causes in the case of tabulatable nonfatal injuries. Thus the largest number of such injuries (19.2 per cent) occurred in the iron and steel industry, and the cause of most of the injuries (29.1 per cent) was hand labor. As to duration of total disability in these cases, 49.3 per cent were incapacitated for 10 days or less and were therefore not compensable. As to "specified injuries" (injuries for which compensation is payable in addition to that for disability), 928 (69.6 per cent) of the 1,334 so classified involved one finger. It is estimated that these specified injuries entailed an additional benefit cost per year of approximately $150,000. Tables giving the weekly wages received by injured employees indicate that 61.7 per cent were in the $8.01 to $15 wage group.

Reports from insurance companies as to benefits paid show that of the nonfatal cases, 65,779 received medical services only, 3,887 received compensation only, 23,819 received both medical services

[1] See MONTHLY REVIEW for October, 1917, p. 133.

and compensation, and that the total amount of medical payments made and outstanding was $834,804.52, while the compensation paid and estimated as outstanding amounted to $3,252,146.97.

Of the 135,257 cases reported to the board, 2,029, or 1.5 per cent, were occupational diseases, for which, in Massachusetts, compensation may be paid. Of this number, the duration of 1,351, or about 2 per cent, of the tabulatable injuries, was more than one day. Twenty-six of these were fatal. In making comparison between the time loss and the wage loss on account of occupational disease on the one hand and nonfatal tabulatable injuries on the other, the report says:

The total number of days lost in nonfatal tabulatable cases of occupational disease is 31,333, an average of 23.3 days per case. The total amount of wages lost in these cases was $70,154, an average of $51.93 per case. The total amount of wages lost in all nonfatal tabulatable cases was $3,353,872, an average of $49.52 per case, and the average duration was 27.07 days per case.

The following table shows the number of fatal and nonfatal cases of diseases of occupation, together with the time loss and the wage loss in nonfatal cases:

NUMBER OF PERSONAL INJURIES BY DISEASES OF OCCUPATION, SHOWING DAYS LOST AND AMOUNT OF WAGES LOST IN NONFATAL CASES.

Occupational disease.	Number of fatal cases.	Nonfatal cases.		
		Number.	Days lost.	Wages lost.
Harmful substances (causing constitutional disturbances):				
Brass		1	4	$9
Dusts		5	60	72
Gases, vapors, and fumes	10	76	1,118	2,138
Hides (anthrax)	5	20	814	1,645
Lead	3	49	3,063	7,645
Harmful conditions:				
Compressed air	4	383	7,734	21,018
Extreme cold	2	77	2,402	5,054
Extreme heat	2	74	622	1,420
Eye strain		7	164	411
Strain, fatigue, cramp, faulty positions, "occupational neuroses," blows, vibration, pressure, etc., causing injuries to nerves, muscles, and bones		34	4,194	9,764
Miscellaneous		4	162	521
Irritant fluids and substances (causing local affections):				
Brass		21	600	1,203
Cement		4	97	292
Chrome		16	269	379
Cyanide and plating solutions		10	123	261
Dyes		32	1,028	1,497
Hides		14	352	579
Lime		51	580	1,091
Oil		48	514	967
Paint		4	340	700
Poisonous vines, trees, shrubs, etc		45	981	2,163
Raw wool		8	104	166
Washing and cleansing fluids		15	198	242
Local irritation from constant vibration, blows, pressure, etc		132	2,234	3,820
Miscellaneous		171	3,576	7,187
Total	26	1,351	31,333	70,154

The report does not indicate the compensation or other expenses incurred by reason of these occupational diseases.

EFFECTS OF DUST INHALATION UPON WORKERS IN THE MANUFACTURE OF SILICIA BRICKS.

Under authorization of the chief inspector of factories of Great Britain an investigation was made of the incidence of respiratory diseases due to the inhalation of dust among workers employed in the manufacture of silica bricks and other refractory materials used in furnaces, with a view to ascertaining the desirability of extending to ganister[1] and silica brick works, under the Factory and Workshop Act, 1901, the regulations which have been applied to ganister mines to lessen the dust production. It seems that when the "Regulations for ganister mines" were made effective an interpretation of the word "mines" rendered the regulations inoperative so far as concerned any works in connection with ganister mines at which the mineral is treated and used in such manufacturing processes as the making of silica bricks, or ganister bricks, ground ganister, silica paint, etc. The investigation was completed during the summer of 1917, and on August 14 a report was submitted to the chief inspector of factories.[2] It appears from a description of the processes in the manufacture of silica bricks that the ganister or silica rock as received from the mine or quarry consists of large blocks of stone which have to be reduced to small fragments before the material can be molded into bricks. This is accomplished by means of a stone-breaking machine, and in the process from 1 to 3 per cent of lime in the form of powdered lime or hydrated solution of lime is added to the crushed ganister while it is being ground, the resulting product, of the consistency of mortar, being discharged on the floor of the brick-making shed, where it is tempered to some extent with shovels and then molded by hand into bricks. After the bricks are dried they are set in the kilns and burned at a temperature rising to 3,000° F., or slightly over, for several days.

In the crushing process, even though the stone is wetted, a large quantity of dust is generated and the men employed in feeding the machines are subjected to a serious dust hazard. But perhaps even more serious is the hazard encountered by those men who are required to break up with hammers the lumps of stone which are too large to enter the jaws of the crushers. This operation is productive of fine smoke-like dust which is liable to be inhaled to some extent by the hammer men even if the work is done in the open air. Much of the

[1] Ganister or silica stone is a quartzite rock found in England beneath the lower coal measures and above the millstone grit, in seams which seldom exceed 4 feet in thickness. It is used in the manufacture of highly refractory bricks and linings required for steel and other furnaces, and its value as a refractory material is due to its high percentage of silica and low content of the alkalies. Other substances similar in chemical composition and refractory properties, e. g., firestone, silica rock, bastard ganister, quartz, chert, flint, and silica sand are in some cases used in its stead.

[2] Great Britain. Home Office. Report on the manufacture of silica bricks and other refractory materials used in furnaces, with special reference to the effects of dust inhalation upon the workers. London, 1917. 16 pp.

work, however, was found to be carried on in closed or partly open sheds in the air of which the dust remains suspended. In some plants the investigation disclosed that certain precautions had been taken to minimize or prevent the dust hazard—the use of water spray or steam jets, covered receptacles for the crushed rock, exhaust fans, and dust collectors. A considerable amount of dust was also noted in some works at sidings where the bricks are loaded into trucks previous to dispatch from the works.

As showing the incidence of lung diseases due to silica dust inhalation, the situation in the neighborhood of Kidwelly, South Wales, where the only bricks made are silica bricks, is presented, revealing the fact that during eight years, among an average of not exceeding 60 workers, there occurred 18 deaths from phthisis and 8 deaths from other diseases of the lungs—a mortality from phthisis of 37.5 per 1,000 men, and from all other respiratory diseases, a mortality of 16.7 per 1,000, or a death rate from respiratory diseases alone of 54.2 per 1,000. The following table presents these figures in comparison with similar data covering all males in England and Wales, and those engaged in the manufacture of bricks, plain tile, and terra cotta, indicating the relatively high risk assumed by those who make silica bricks.

MORTALITY AMONG SILICA BRICK MAKERS IN THE KIDWELLY DISTRICT, SOUTH WALES, AS COMPARED WITH MORTALITY AMONG ALL MALES IN ENGLAND AND WALES, AND THOSE ENGAGED IN MAKING BRICKS, PLAIN TILE, AND TERRA COTTA.

Class.	Age.	Period.	Death rate per 1,000 from—		
			Phthisis.	All other respiratory diseases.	All causes.
All males (England and Wales)	15 years and over	1900–1902	2.1	2.8	16.3
Brick, plain tile, terra cotta makers	do	1900–1902	1.0	2.1	10.4
All persons (Kidwelly)	All ages	1909–1913	1.3	(1)	17.0
Silica brick makers (Kidwelly and district)	Adults	1905–1912	37.5	16.7	(1)

[1] Not reported.

Although the total number of deaths among silica brick makers upon which the death rates are calculated is small, the death rate from lung diseases, especially from phthisis, is sufficiently excessive to justify the conclusion that the occupation of making silica bricks is attended with a serious mortality from respiratory diseases among those employed, and that this mortality is far in excess of that suffered by males in general, by the population among whom they live, and by makers of ordinary bricks from plastic clay.

The report points out, however, that the influence of silica dust in favoring tuberculosis infection is modified when the silica is mixed with certain clays.

Ganister or other stones containing a high percentage of free silica are mixed with clay sufficient for binding purposes in the manufacture of certain refractory bricks and

other articles; and stone is added in varying proportions to fireclay to increase its refractory properties, or to modify or reduce the amount of shrinkage when subjected to high temperatures. During this inquiry no history has been obtained, up to the present, either from workers or occupiers that a high mortality from phthisis is experienced by those employed in the manufacture of such articles containing clay as an admixture.

Some suggestions are made to effect the prevention of dust inhalation. Chutes to guide the stones into the crusher jaws and obviate the necessity of having men at that point are mentioned; the use of the water spray or steam jet playing into the jaws of the crusher has already been referred to. Where this latter is not practicable the provision of a powerful exhaust draught induced by a suitable fan and properly constructed hood placed above the crusher jaws may be employed. The installation of an exhaust ventilation plant, it is suggested, must also include the provision of efficient dust-collection appliances such as textile filters, cyclone collectors, water tanks, or chambers fitted with water sprays. Where hand breaking of the stone is carried on it is recommended that suitable respirators be worn, but this expedient may be avoided "by the installation of an additional powerful stone-breaking machine, with jaws specially set for dealing with large blocks." The inhalation of the dust which is present after the bricks have dried, and which is set in motion by the removal of the bricks, may be largely prevented by careful wet sweeping.

The recommendations and suggested code of regulations submitted as a result of the investigation and which, owing to greatly increased production of refractory goods, it is estimated will apply to approximately 100 factories employing about 5,000 workers, are as follows:

We recommend that the manufacture of silica bricks and the crushing, grinding, and sieving of silica should be certified as dangerous under section 79, Factory and Workshop Act, 1901; and, further, that regulations should be made under section 79 to apply to all factories and workshops, or parts thereof, in which any of the following processes are carried on: The manufacture of silica bricks; the crushing, grinding, and sieving of silica.

Suggested code of regulations.—In these regulations silica means material containing not less than 80 per cent of silica ($Si\ O_2$), and includes ganister, silica stone, bastard ganister, firestone, quartz, quartzite, flint, chert, gritstone, and sandstone.

Silica brick means any brick composed of silica, bonded with lime, or any "ganister brick," bonded with clay, and containing not less than 80 per cent of silica ($Si\ O_2$).

1. No silica shall be broken in pieces by manual labor unless the process is carried out in the open air.

2. No silica shall be crushed or ground in a stone-breaking machine or a grinding machine unless such machine (*a*) is provided with an exhaust draught and efficient dust-collecting appliances, so arranged as to prevent the escape of dust into the air of any place in which work is carried on; or (*b*) is provided, and kept provided, with an efficient water or steam spray or other arrangement to prevent the escape of dust into the air; or (*c*) is so entirely inclosed as to prevent the escape of dust into the air.

3. All elevators, screens, and sieves used for manipulating silica shall be so entirely inclosed as to prevent the escape of dust into the air, or be provided with an exhaust draught so arranged as to prevent such escape of dust.

4. The floors of all places where silica bricks are dried shall, after each lot of bricks has been removed, be carefully freed from all débris by a moist method. Provided, always, that this regulation shall not apply to the floors of tunnel driers.

5. No drying stoves in which bricks are baked by fires before being placed in the kilns shall be used after January 1, 1923, unless the chief inspector of factories shall certify in writing that, in his opinion, the use of such stove involves no danger to the health of the persons employed therein. Provided, always, that this regulation shall not apply to tunnel driers.

6. The use of silica dust or powder for dusting the molds in brick making shall be prohibited.

7. There shall be provided suitable respirators for the use of all persons employed in (1) breaking silica into pieces by manual labor, unless wet brattice cloth is properly used to prevent escape of dust in this process; (2) placing or removing bricks from drying flats, and drying stoves, other than tunnel driers; and (3) setting or drawing silica bricks in kilns; which respirators, when required for such use, shall be washed or renewed at least once every day.

8. When placing or drawing silica bricks in kilns no person shall throw the bricks to another.

9. No person shall work or cause or allow to be worked any stone-breaking machine unless such machine complies with the requirements of regulation 2.

10. Every person for whose use a respirator is provided in pursuance of regulation 7 shall wear the respirator while employed in any process to which regulation 7 applies.

EYE HAZARDS IN INDUSTRIAL OCCUPATIONS.

The large number of eye injuries occurring each year to workmen in industrial occupations is a source of much concern to employers and to safety engineers, especially since most of the minor injuries and many of the serious injuries, each due to an accident or to infection resulting in the loss of one or both eyes, are preventable. Although definite and systematic efforts are being made in many plants to educate employees in the use of safety appliances for the protection of the eyes, the fact remains that even in these plants some workmen will not use the devices because of inconvenience unless the requirement is mandatory, and where no safety rules are in force workmen are either ignorant of the eye hazards existing in their employment or do not fully appreciate the terrible risk they are taking in working without properly protecting their most important members. Owing to the lack of uniformity in reporting, it is not possible to state with any degree of definiteness the actual number of eye injuries occurring in the course of a year in the industries of the United States. In many of the States such information is available and published reports for the year ending June, 1917, record 59,436 eye accidents, or approximately 8.3 per cent of

the 710,571 industrial accidents reported by these States.[1] This statement appears in connection with a tabulated digest of available statistics on eye accidents in United States industries published in a pamphlet entitled "Eye Hazards in Industrial Occupations," issued in November, 1917, by the National Committee for the Prevention of Blindness.[2] The pamphlet is the outgrowth of a survey made between August 8 and November 8, 1916, of representative industries in the city of Buffalo to ascertain the local working conditions and the industrial accident hazards which might be productive of eye injuries. Seventy plants employing 35,000 workers and covering a wide range of operations were studied. The attitude of employers and workmen alike toward the need for eye protection in any process, or toward the use of the protective features, was made the subject of special inquiry. Much of the report is taken up with a description of the various operations hazardous to the eyes, with recommendations for the installation of protective devices or for such changes in working conditions, lighting arrangements, etc., as will prove effective in reducing or completely eliminating the preventable industrial accidents to eyes. The wearing of goggles is almost uniformly recommended. It was found that the various hazards to the eyesight of industrial workers are found chiefly in the following industries and occupations: The manufacture of iron and steel; machine operations; chipping; grinding and polishing; riveting; welding and cutting; mining and quarrying; occupations in which there is exposure to irritating and poisonous dusts, fumes, and gases; the chemical industries and occupations involving the handling of acids and chemicals; metallurgic operations where there is great exposure to intense light and heat; glass making; sand blasting; woodworking operations; the garment trades; and agricultural pursuits.

As to the incidence of eye accidents, the cases of blindness resulting therefrom, and their economic significance, it would seem, from a review of available reports, that the following statements, the absolute accuracy of which can not of course be determined, are probably approximately correct:

1. Of the 2,000,000 annual nonfatal accidents, probably 200,000 are accidents to the eyes.

2. Approximately 15,000 persons in the United States are blind to-day as the result of accidental injury in industrial occupations.

3. The maintenance of these blinded artisans during the remainder of their lives will cost nearly $10,000,000, which expense will fall in large part on relatives, community, or State.

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[1] These figures are unquestionably low even for the States reporting, since in many of them thousands of employers and employees are not covered by State acts and consequently no reports of accidents are filed.

[2] Eye Hazards in Industrial Occupations. A report of typical cases and conditions, with recommendations for safe practice. By Gordon L. Berry, field secretary, National Committee for the Prevention of Blindness, with the cooperation of Lieut. Thomas P. Bradshaw, U. S. Army, formerly technical assistant to the director of the American Museum of Safety, 130 East Twenty-second Street, New York City, November, 1917. 145 pp. Illustrated.

4. The actual economic loss can not be estimated, and the loss to the unfortunate person whose eyesight is destroyed is, least of all, a matter of dollars and cents.

From these statements is it not apparent that one of the most important industrial problems of to-day is that of the protection of employees from accidents that will destroy or greatly impair vision?

The lodgment of a foreign substance in the eye, too often considered of little importance by workmen, may be a source of very serious eye trouble and possible loss of the member. The report emphasizes the danger from infection which may, and often does, result when the workman neglects the condition or permits the removal of such foreign substance by a fellow workman instead of going at once to a competent physician, or to a hospital. This practice is strongly condemned. "The potentialities of disaster which lie in this kind of procedure should be sufficiently awful to put a stop to the effort if workmen could but understand their significance." The experience of Ohio is quoted. In that State, of 74,525 industrial accidents for which awards were made by the industrial commission in the year ending June 30, 1915, infection was reported in connection with 7,072 or approximately 10 per cent,[1] and of 71,400 cases of temporary disability allowed there were 8,000 cases due to the presence of foreign bodies in the eyes, 519 (6.48 per cent) of these being attended by infection.

The report contains a section on agricultural hazards, in which it is noted that "in all but the large manufacturing centers the majority of serious eye accidents occur among agricultural laborers. Most of them might have been avoided by care. Many of them have resulted in infection and blindness because * * * days or weeks were allowed to intervene between the time when the injury was sustained and the date of calling in an oculist or physician." A number of the State reports are cited showing the incidence of agricultural injuries in relation to all injuries.

A section on goggles indicates the very great probability of preventing the loss of or injury to the eyes if their use can be obtained, either voluntarily or by compulsion. It is stated that during the year 1913, 2,499 employees of a certain railroad sustained eye injuries, many of which were serious, and every one of which, according to an official of the company, might have been prevented if goggles had been worn. A table showing the experience of the American Locomotive Co. (New York) for the years 1910 to 1915 offers an interesting comparative study of the effect of the establishment of the use of safety goggles, the years 1910 to 1913 covering the period when the goggles were not used.

[1] Infections following accidents in Ohio. Industrial commission. Department of investigation and statistics. Report No. 29. This report is noted in the MONTHLY REVIEW for September, 1917, pp. 109, 110.

EXPERIENCE OF THE AMERICAN LOCOMOTIVE CO., SHOWING THE EFFECT OF THE ESTABLISHMENT OF THE USE OF SAFETY GOGGLES, COVERING THE PERIOD 1910 TO 1915.[1]

Year.	Number of accidents requiring medical attention.	Number of eyes lost.	Average number of full-time men per year.	Number of full-time men per year per eye lost.	Number of injuries per 1,000 full-time men per year.	Number of full-time men per year per injury.
1910	518	13	[2]11,547	1,119	35.6	28.0
1911	293	7	8,358	1,194	35.0	28.5
1912	491	13	11,084	853	44.3	22.5
1913	490	9	12,042	1,338	40.7	24.7
Average, 1910 to 1913	448	10.5	11,506	1,108	38.9	25.7
1914 [3]	86	1	5,004	5,004	17.2	58.2
1915 [4]	52	2	3,311	1,656	15.7	63.6

[1] To obtain the statement for this year the actual figures for the first six months were multiplied by 2.
[2] This figure is taken from the report. Based upon the results obtained in the three following columns, the number should be 14,547.
[3] Period during which the use of safety goggles was general.

Considerable attention is given in the report to the matter of adequate lighting in factories.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, FEBRUARY 15, TO MARCH 15, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between February 15, 1918, and March 15, 1918, in 91 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, FEBRUARY 15 TO MARCH 15, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Graniteville Manufacturing Co., Graniteville, S. C.	850	200	Adjusted.
Controversy, Employers' Association and pattern makers, Pittsburgh, Pa.	450	12,000	Do.
Strike, coal miners, Pittsburgh district, Kansas			Do.
Threatened strike, machinists and helpers, Wellman, Seaver & Morgan Co., Akron, Ohio.	450	150	Do.
Threatened strike, machinists, Stewart Manufacturing Co., Chicago.	75	500	Do.
Strike, laundry workers, Kansas City, Mo			Pending.
Lockout, machinists and tool makers, General Electric Co. (experimental department), Pittsfield, Mass.	2,500	6,000	Adjusted.
Controversy, Erie Boiler Works and boiler makers, Buffalo, N. Y.	60		Pending.
Controversy, railway clerks and station employees, Oregon-Washington Railroad & Navigation System.	750	15,000	Referred to Director General of Railroads.
Strike, molders, Boston, Mass	1,200	1,600	Adjusted.
Strike, Southwestern Broom Co., Wichita, Kans			Pending.
Strike, American Smelting & Refining Co. (Hayden smelter), Hayden, Ariz.	200	550	Adjusted.
Strike, Geo. Hendell & Sons, Shillington, Pa	35		Do.
Strike, Detroit Sulphite, Pulp & Paper Co., Detroit, Mich.	300	150	Pending.
Controversy, Tacoma Smelting Co., Tacoma, Wash	80	1,000	Adjusted.
Strike, Wright Shipyards, Tacoma, Wash	225		Do.
Threatened strike, longshoremen, dock of Northern Pacific R. R. Co., Tacoma, Wash.	100		Do.
Controversy, Wireless Specialty Co. and metal polishers, Boston, Mass.			Pending.
Threatened strike, street railway employees, Boston Elevated R. R., Boston, Mass.			Adjusted.
Controversy, Goodrich Rubber Co., Akron, Ohio	100		Do.
Strike, National Zinc Co., Kansas City, Kans	306	30	Do.
Controversy, machinists, Liberty Ordnance Co., Bridgeport, Conn.	350		Do.
Controversy, Superior Ship Building Co., Superior, Wis	800		Do.
Strike, retail clerks, St. Louis, Mo			Pending.
Threatened strike, Fulton Machine Co. machinists, Knoxville Tenn.	9	425	Do.
Strike, carpenters, 49 shipyards and allied essential industries engaged in war shipbuilding program, New York.	3,009		Adjusted.
Strike, stove mounters, Detroit, Mich., at Michigan Stove Co., Art Stove Co., Peninsular Stove Co., and Detroit Stove Works.	120	1,900	Pending.
Controversy, Kroeschell Bros. Ice Machine Co. and machinists, Chicago, Ill.	28	65	Do.
Controversy, Franklin, Pa., at—			
French Creek Foundry Co	20	60	Do.
Franklin Foundry Co	35	80	Do.
Venango Manufacturing Co	15	55	Do.

LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, FEBRUARY 15 TO MARCH 15, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, automobile mechanics, Packard Motor Car Co., Philadelphia.	75	.....	Adjusted.
Strike, boiler makers, Birmingham & Southern R. R. Co.	5,000	.....	Pending.
Lockout, flint glass workers, Empire Cut Glass Co., Flemington, N. J.	40	5	Do
Controversy, Mississippi River and Bonne Terre R. R. and maintenance of way employees, Bonne Terre, Mo.	.....	.....	Do.
Controversy, Southern Pacific R. R. Co. and machinists, Los Angeles, Cal.	8	175	Matter referred to Director General of Railroads.
Controversy, machinists, Worcester, Mass	.....	.....	Pending.
Controversy, Willys-Overland Co. and machinists, Elyria, Ohio.	1,200	.....	Adjusted.
Controversy, Vari Lace Co., New York	.....	.....	Do.
Strike, Gurlow Steel Co., Philadelphia, Pa	.....	.....	Pending.
Strike, freight handlers on piers of Central Vermont R. R., New London, Conn.	91	.....	Adjusted.
Controversy, Lowell Cotton Mills and machinists, Lowell, Mass.	.....	.....	Pending.
Controversy, Saco-Lowell Co. and employees, Lowell, Mass.	1,900	.....	Adjusted.
Threatened strike, carpenters employed by contractor in erection of hotel, Jerome, Ariz.	10	.....	Do.
Strike, Mount Vernon-Woodbury Cotton Duck Mills, Baltimore, Md.	1,800	2,000	Do.
Controversy, Elgin, Joliet & Eastern R. R. Co., Gary, Ind.	290	800	Referred to Director General of Railroads.
Threatened strike, packers, St. Louis, East St. Louis, and Alton, Ill.	.....	.....	Pending.
Controversy, H. P. Snyder Mfg. Co., Little Falls, N. Y	40	400	Adjusted.
Controversy, Imperial Electric Co. and machinists, Akron, Ohio.	40	.....	Do.
Lockout, Telephone Co., Denver, Colo	.....	.....	Pending.
Controversy, Lorain Boiler Works, Lorain, Ohio	.....	.....	Do.
Controversy, Shoreham, Willard, Powhatan, Lafayette, Arlington, Raleigh, Continental, Bellevue, and Occidental hotels, Losekam and Bartholdi cafes, and Washington Waiters' Union No. 781, Washington, D. C.	350	.....	9 adjusted, 2 pending.
Threatened strike, railway clerks, Baltimore Division, Pennsylvania R. R. Co., Baltimore, Md.	2	200	Adjusted.
Strike, machinists and pipe fitters, Hercules Powder Co., San Diego, Cal.	62	950	Pending.
Controversy, telephone operators, Massachusetts	.....	.....	Adjusted.
Threatened strike, Imperial Electric Co., Akron, Ohio	35	115	Do.
Controversy, Louisville & Nashville R. R. Co., Jackson, Ky.	1	.....	Matter investigated for Division of Labor, United States Railroad Administration, and report submitted.
Controversy, Los Angeles & Salt Lake R. R. Co., Los Angeles, Cal.	.....	.....	Pending.
Controversy, Lehigh Valley R. R. Co., Manchester, N. Y.	6	40	Adjusted.
Strike, machinists and helpers, Hog Island	50	.....	Do.
Strike, Wagner Electric Co., St. Louis, Mo	2,600	.....	Pending.
Controversy, metal trades, Great Falls, Mont	.....	.....	Do.
Lockout, Stone & Webster Co. and electrical workers, El Paso, Tex.	.....	.....	Adjusted.
Strike, Madison Woolen Co., Madison, Me	.....	.....	Pending.
Controversy, United Big Vein Coal Co. and Sullivan Bros. Fuel Co., Cumberland, Md.	.....	.....	Do.
Controversy, Huntington Lumber & Supply Co., Huntington, W. Va.	.....	.....	Do.
Controversy, American Graphophone Co. and machinists and toolmakers, Bridgeport, Conn.	115	3,900	Adjusted.
Controversy, Remington Arms Co., Bridgeport, Conn	.....	.....	Pending.
Walkout, Pullman Palace Car Co., Wilmington, Del	600	.....	Adjusted.
Controversy, Western Union telegraphers, Jacksonville, Fla.	.....	.....	Pending.
Strike, silk mill workers, Allegany County, Md	.....	.....	Do.
Controversy, Kinlock Telephone Co., St. Louis, Mo	.....	.....	Do.
Controversy, Utah Copper Co., Salt Lake, Utah	.....	.....	Do.
Controversy, Keystone Steel & Wire Co., South Bartonville, Ill.	.....	.....	Do.

LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, FEBRUARY 15 TO MARCH 15, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, sheet-metal workers, The Clothel Co., Bayonne, N. J.	104	67	Pending.
Lockout, Kennecott Copper Co., Alaska			Do.
Controversy, Copper River & Northwestern R. R. Co. and train and engine men, blacksmiths, boiler makers, machinists, carpenters, and yardmen, Cordova, Ala.			Do.
Controversy, machinists, Perth Amboy, N. J.			Do.
Lockout, street railway employees, Waco, Tex.			Do.
Strike, firemen, cotton mills, Fall River, Mass.			Adjusted.
Controversy, street railway employees, Des Moines, Iowa.			Pending.
Lockout, Ross Gear & Tool Co., Lafayette, Ind.			Do.
Controversy, The Willys-Overland Co., Toledo, Ohio			Do.
Threatened strike, blacksmiths and helpers, American Car and Foundry Co., Wilmington, Del.			Do.
Controversy, Toledo Machine and Tool Co. and machinists, Toledo, Ohio.			Do.
Controversy, Quaker Oats Co., Cedar Rapids, Iowa			Do.
Strike, tobacco workers, Liggett & Myers Co., St. Louis, Mo			Do.
Controversy, Bell Telephone Co., Colleyville, Kans			Do.
Strike, flour and grain handlers, Seattle, Wash.	500	2,000	Do.
Controversy, Standard Gauge & Steel Co., Beaver Falls, Pa.			Do.
Strike, drug clerks, Denver, Colo			Do.

The following cases noted in the February 14 statement have been disposed of:

Controversy, plumbers and steam fitters, Camp Pike, Ark. Adjusted.
Controversy, Charles Kronauer & Co., Harness & Saddlery Works, Chicago, Ill. Unable to adjust.
Controversy, Schlueter Mfg. Co. and sheet-metal workers, St. Louis, Mo. Adjusted.
Controversy, Southern Ry. Co. and clerks (entire system). Matter referred to Director General of Railroads.
Controversy, Remington Arms Co. and metal polishers, Eddystone, Pa. Adjusted.
Controversy, Sturtevant Co. and metal polishers, Boston, Mass. Company is considering moving two or three pattern makers for repair work into some other department, on account of high cost of operating pattern shop; others advised to look for work elsewhere; company agreed to reemploy when business increases.
In connection with strike of machinists, Tennessee Coal, Iron & R. R. Co., Ensley, Ala., Commissioner Fairley reports strikes at the following plants:
- U. S. Cast Iron & Pipe Co., Bessemer, Ala. Pending.
- Hardie, Tynes Co., Birmingham, Ala. Pending.
- Kehn Foundry Co., Birmingham, Ala. Pending.
- Montgomery Coal Washer Co., Birmingham, Ala. Pending.
- American Casting Co., Birmingham, Ala. Pending.
- Sloss-Sheffield Steel & Iron Co., Birmingham, Ala. Pending.
- Central Foundry Co., Birmingham, Ala. Pending.
- Southern Wheel Works, Birmingham, Ala. Pending.
- Stockham Pipe & Fittings Co., Birmingham, Ala. Pending.
- Bessemer Machine Co., Bessemer, Ala. Pending.
- North Birmingham Furnace Co., North Birmingham, Ala. Pending.
- Demmick Foundry & Pipe Works, Birmingham, Ala. Adjusted.
- Ajax Metal Co., Birmingham, Ala. Adjusted.

Controversy, Chicago & Eastern Illinois R. R. Co. and maintenance of way employees. Referred to Director General of Railroads.
Strike, Canton Stamping & Enameling Co., Canton, Ohio. Unable to adjust.
Controversy, Jacksonville Terminal Co., Jacksonville, Fla. Referred to Director General of Railroads.
Controversy, Woodward & Tiernan Printing Co. and bookbinders, St. Louis, Mo. Adjusted.
Strike, electrical workers, Continental Can Co., Chicago, Ill. Adjusted.
Controversy, Nickel Plate R. R. and freight handlers and transfer men, Cleveland, Ohio. Referred to Director General of Railroads.
Controversy, Savage Arms Co., Utica, N. Y. Adjusted.
Controversy, Atchison, Topeka & Santa Fe R. R. Co. and clerks, Chicago, Ill. Referred to Director General of Railroads.
Controversy, Western Gas Co., Fort Wayne, Ind. Adjusted.
Controversy, Missouri, Kansas & Texas R. R. Co. and clerks, Fort Worth, Tex. Adjusted.
Controversy, butchers, Denver, Colo. Adjusted.
Strike, Grant Smith Shipyards, Portland, Oreg. Referred to United States Shipping Board.

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STRIKES AND LOCKOUTS.

STREET CAR LABOR DISPUTE AT MINNEAPOLIS AND ST. PAUL.[1]

"Because of the Federal interests which may become involved" the Council of National Defense requested the President's mediation commission to make an informal investigation of the street car strike in Minneapolis and St. Paul and the threatened sympathetic strike which, if called, would affect a number of war industries. The report of the commission was submitted to the chairman of the Council of National Defense under date of February 14, 1918.

The facts developed by the commission indicate that while the company conceded the right of the men to organize, it had, between September 22 and October 4, 1917, discharged 57 of its employees for the reason, as alleged by the union, that these men were active in union affairs. The company denied that this reason was the controlling one. The union called a strike effective October 6 which, however, was terminated on October 9 by the action of the Minnesota State Public Service Commission, a statutory body with broad powers. The union then attempted to extend its organization, and to combat this the company proceeded to build up its employees' mutual benefit society, with the result that both sides began to wear buttons designating the respective organizations to which they belonged. A subcommittee of the State public service commission, upon investigation, found that some irritation was being caused by this practice and recommended on November 19 that the buttons be laid aside. Most of the union men, however, refused to do this, and on November 25 the company posted notices that any employees continuing to wear buttons would not be retained in its service. Several hundred of the men thereupon considered themselves locked out by the company, which, however, the company denied. On November 27 the State public service commission's recommendation of November 19 that all buttons be laid aside was given the force of an order binding both upon the company and its employees.

A general sympathetic strike of all the trade-union men in Minneapolis and St. Paul was ordered for December 13, 1917, an order which would affect a number of war industries and possibly also interfere with interstate railroad transportation. The sympathetic strike order was withdrawn on December 19 at the request of the President's mediation commission. In January the company drew into its employ 28 men from the country districts, while several hundred of its former employees were idle, and the attention of the

[1] Data taken from Official Bulletin for Feb. 19, 1918.

company was directed to the fact that such action was opposed to the Government's war needs which require that men employed in war industries and in the farming districts be not removed to nonwar industries.

After consideration of all these facts developed by the inquiry the President's mediation commission made the following recommendations for the protection of the national interests involved:

(1) While competent former employees are available, the company should not engage men who are at the time employed or can be used in farming pursuits or war industries.

(2) The Nation's requirement of full use of its man power makes it necessary that industries employ men out of work who are as competent as men at the time employed in other lines of work. The Twin City Rapid Transit Co. should in consequence not engage men at work in other industries while idle men, at least as competent, are available in the Twin Cities.

(3) The company should prefer for employment men skilled in the particular line of work over others who have not already had the training or experience for the performance of such work. The company has in the past acted upon this policy because beneficial to it in another aspect, as it has realized that the breaking in of new men is a financial burden which should be avoided. During the October strike the company abstained from employing strike breakers.

Specifically, the company should give preference of employment to its former employees who are now available for employment and who ceased to be in the company's employ in consequence of the labor disputes of the last several months. These men should be reemployed in preference to any others, and the company should not seek to obtain any new employees, either by advertising or otherwise, or engage any other men while its former employees, who are competent, can be secured for the service of the company.

(4) The company has previously announced that it did not intend to discriminate against men because of their affiliations with trade-unions. It understood that the State commission's order provided for the men's going back to work on this basis. The governor of the State, as chairman of the State commission, has publicly stated "that there should be no discrimination against union men." In accordance with the company's announcement, with its understanding of the policy of the State commission, and with the principle stated by its chairman, the company, in returning to work the men who deemed themselves locked out by the company's order, should not discriminate against any of these because of their membership in trade-unions.

(5) The company should, in reemploying these men, follow the principle adopted by the State public safety commission on the previous occasion when a considerable body of men, deeming themselves aggrieved, ceased to work for the company. In the words of the company's representative, "the safety commission said 'these men go back to work with their old standings.' "

The men now out, when put back to work, should be reinstated as to wages, and their status in all respects should be the same as if they had not ceased to be employed by the company.

(6) The employees of the Twin City Rapid Transit Co., who are still without work, should offer themselves for reinstatement by the company as vacancies occur.

PRESIDENT'S MEDIATION COMMISSION.
W. B. WILSON, *Chairman.*
J. L. SPANGLER.
E. P. MARSH.
MAX LOWENTHAL, *Assistant Secretary.*

On March 4 the acting chairman of the Council of National Defense sent the following telegram to the chairman of the Minnesota State Public Service Commission:

Because of the Federal interests involved, the Council of National Defense requested the President's mediation commission to make an informal investigation of the street car strike in the Twin Cities and the threatened sympathetic strike connected with it. The commission reported to the Council under date of February 14 with a number of recommendations. The Council of National Defense is strongly convinced that the policy outlined in the recommendations is essential to the promotion of national defense.

At the time this issue of the REVIEW goes to press no adjustment has been reached. Two members of the mediation commission are in St. Paul endeavoring to effect a settlement.

SETTLEMENT OF LABOR DISPUTES IN THE FRENCH MERCHANT MARINE.[1]

The Minister of Commerce and Industry, Posts and Telegraphs, and Merchant Marine issued a decree on December 22, 1917, providing for an early settlement of all collective disputes relative to wages or conditions of labor arising in the merchant marine. The general provisions are summarized as follows:

As soon as the port warden receives information that a collective dispute exists, involving at least 20 regular seamen, deck-hands, engineers, firemen, etc., he shall immediately invite all interested parties to meet at his office in an attempt at conciliation. This meeting shall not be held within 24 hours after issuing the call, but shall be held within three days. Should either party, employer or employees, fail to respond to the call, the port warden shall prepare a report, addressed to the under-secretary of maritime transportation, setting forth the attempt at conciliation and its failure.

Should both parties respond to the call, the port warden shall endeavor to conciliate the differences, and if an agreement is reached, shall prepare a report containing the terms of agreement, which shall be signed by him and the interested parties or their delegates. If no agreement is possible the under-secretary shall be so informed, and he shall immediately refer the question at issue to a superior committee of arbitration, composed of the under-secretary as president, and 5 employers, selected by the national association of employers, 5 representatives of the seamen, designated by the national federation of seamen, and 2 other persons, 1 chosen by the 5 representatives of each of these bodies from magistrates or former magistrates of the judiciary or administrative class who are residents

[1] Journal Officiel de la République Française, Dec. 24, 1917, p. 10557.

of Paris, or from professors in the law faculty of the University of Paris. In case a selection is not made by either of the representative bodies named, the under-secretary shall make such selection.

Not less than 6 arbitrators, 3 representatives from each of the bodies named, together with the 2 other designated members, shall constitute a qualified body. In all cases the parity of representation shall be observed. In case of unequal representation the persons who shall sit upon the board shall be determined by lot. The chief of the under-secretary's office shall act as general secretary to the board.

The board shall have its office at Paris, but it may visit any port where a dispute exists, or delegate some of its members to collect data and complete its investigations. In any number so delegated parity of representation shall be maintained. All decisions must be rendered at the office of the board in Paris. In case a decision is not reached by a majority of votes, the undersecretary shall decide, mention being made thereof in the records. The decisions of the boards are to be published by means of posters placed at the entrances to the offices of the port warden, and are to be filed with official acts relating to the merchant marine. The decree designedly provides no penalties for noncompliance with decisions rendered.

IMMIGRATION.

IMMIGRATION IN DECEMBER, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During 1917 the figures for the first three months show a considerable decrease from month to month. The decrease from the preceding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May show a decrease of 48.9 per cent. The figures for June indicate an increase of 5.5 per cent over those for May. During July only 9,367 immigrant aliens were admitted. As compared with the figures for July, those for August show an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August the figures for September show a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. The admissions in November numbered only 6,446, a decrease of 30.6 per cent from the number admitted in October. In December there was an increase of 8.4 per cent. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	[1] 19.9
February	59,156	46,873	13,873	24,740	19,238	[1] 22.3
March	96,958	92,621	19,263	27,586	15,512	[1] 19.4
April	136,371	119,885	24,532	30,560	20,523	32.3
May	137,262	107,796	26,069	31,021	10,487	[1] 48.9
June	176,261	71,728	22,598	30,764	11,095	5.5
July	138,244	60,377	21,504	25,035	9,367	[1] 15.6
August	126,180	37,706	21,949	29,975	10,047	7.3
September	136,247	29,143	24,513	36,398	9,228	[1] 8.2
October	134,440	30,416	25,450	37,056	9,285	.6
November	104,671	26,298	24,545	34,437	6,446	[1] 30.6
December	95,387	20,944	18,901	30,902	6,987	8.4

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during December, 1916 and 1917, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, DECEMBER, 1916 AND 1917.

Race.	Admitted.		Departed.	
	December, 1916.	December, 1917.	December, 1916.	December, 1917.
African (black)	415	294	105	149
Armenian	130	27	17	10
Bohemian and Moravian	45	4	18	145
Bulgarian, Serbian, Montenegrin	82	17	29	5
Chinese	181	180	277	196
Croatian and Slovenian	25	1	2	.....
Cuban	107	25	263	142
Dalmatian, Bosnian, Herzegovinian	29	.....	.....	3
Dutch and Flemish	454	142	76	73
East Indian	3	3	12	23
English	3,224	819	596	1,115
Finnish	646	273	119	37
French	2,459	446	196	292
German	1,087	178	66	43
Greek	3,028	111	153	35
Hebrew	2,276	318	14	28
Irish	1,653	291	152	255
Italian (north)	352	91	549	98
Italian (south)	5,024	586	1,493	541
Japanese	693	641	68	112
Korean	27	7	2	6
Lithuanian	68	15	1	2
Magyar	49	.....	3	31
Mexican	1,276	28	35	73
Polish	437	68	9	297
Portuguese	1,513	300	105	47
Roumanian	41	28	12	14
Russian	489	122	291	250
Ruthenian (Russniak)	97	10	2	.....
Scandinavian	1,814	898	736	859
Scotch	1,481	306	183	287
Slovak	28	3	.....	120
Spanish	840	546	457	132
Spanish-American	187	112	52	61
Syrian	59	15	17	12
Turkish	59	1	1	3
Welsh	97	21	5	18
West Indian (except Cuban)	66	43	80	53
Other peoples	321	17	24	35
Not specified	.....	.....	785	.....
Total	30,902	6,987	7,005	5,602

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. General Construction Safety Orders. Effective January 15, 1918. Sacramento, 1917. 32 pp.*

These orders are intended to apply to the construction, alteration, repairing, renovating, removal, or wrecking of buildings or other structures within the State.

—— *Social Insurance Commission. California's need of social health insurance. Sacramento, 1917. 16 pp.*

The purpose of this pamphlet is to call the attention of California voters to the fact that in November, 1918, they will be called upon to decide whether or not the State shall have a social insurance system, and its pages are devoted to a summary of the facts and statistics gathered by the commission in its investigation of social and industrial conditions in California which convinced that body of the need of compulsory health insurance for the benefit of the wage earners of the State.

—— *State Council of Defense. Report of the Committee on Petroleum. Sacramento, July 7, 1917. 191 pp. Numerous charts and diagrams.*

Discusses the world's petroleum situation, laying special emphasis upon the production and consumption of California oil, and concluding with recommendations as to increasing the production, decreasing the consumption, the supply of labor employed in the industry, and transportation—all intended to effect conservation of the supply.

MARYLAND.—*Annual report of the mine inspector from May 1, 1915, to May 1, 1917, to the Hon. Emerson C. Harrington, Governor of Maryland. Baltimore [1917]. 140 pp. Illustrated.*

MASSACHUSETTS.—*Homestead Commission. The Lowell homestead project; description, explanation, and list of questions. 16 pp. Bulletin No. 7, revised December, 1917. Illustrated. Plans. [Boston], 1917.*

This describes what is the first State-aided housing project in the United States. The commission has begun the construction of about 20 houses with the funds at present available. A garden space will be provided with each house and the houses will be sold on small monthly payments. Three types of houses will be constructed, viz, two types of five-room detached cottages, and a four-room semidetached type. The five-room detached cottages cost about $2,334 and $2,382, respectively, and the semidetached about $1,953.

—— *Industrial Accident Board. Fourth annual report, including statistical information and tables on the experience for the year, a comparison of frequency and nature of injuries for four years, and general information on different phases of the compensation act, July 1, 1915, to June 30, 1916, inclusive. Public Document No. 105. Boston, 1917. 272 pp. Illustrated.*

This report is noted on pages 289 to 291 of this issue of the MONTHLY REVIEW.

NEW JERSEY.—*Report on health insurance by the New Jersey Commission on old age insurance and pensions. Rahway [1917]. 20 pp.*

This report is noted on pages 274 to 276 of this issue of the MONTHLY REVIEW.

OHIO.—*The Industrial Commission. Department of Investigation and Statistics. Report No. 32. Preliminary survey of labor camps in Ohio. Columbus, Nov. 29, 1917. 22 pp.*

This report is noted on pages 280 to 283 of this issue of the MONTHLY REVIEW.

—— —— —— *Report No. 33. Union scale of wages and hours of labor in Ohio on May 15, 1917. Columbus, 1918. 44 pp.*

This is the fourth annual report on this subject. Approximately 95,000 wage earners are covered; 14 cities are included; and organized trades recognized in the report are bakeries, breweries, building, metals, printing and publishing, and miscellaneous trades.

PENNSYLVANIA.—*Department of Labor and Industry. Safety standards of the Industrial Board. Vol. 1, No. 22. Lead corroding and lead oxidizing. 15 pp. Vol. 1, No. 25. Suggested safe practices for the manufacture of nitro and amido compounds. 18 pp.* [*Harrisburg, 1917.*]

WISCONSIN.—*Industrial Commission. Code of boiler rules. Madison* [*1917*]. *52 pp. Diagrams.*

—— —— *Standard requirements for bricklayers.* [*Madison*] *Jan. 1, 1918. 6 pp.*

An outline suggesting the subject matter of the trade of bricklayer with which an apprentice should be familiar before he can claim to be a first class mechanic and receive the State diploma.

UNITED STATES.—*Council of National Defense. First annual report, for the fiscal year ended June 30, 1917. Washington, 1917. 130 pp.*

Contains a section describing in some detail the organization and functions of the committee on labor of the Council of National Defense, taking up specifically the attitude of labor toward the War, the efforts being made to maintain existing labor standards on Government work, the visit of the British labor mission to the United States in May, 1917, and suggesting the purposes intended to be accomplished by subcommittees or divisions of the committee on labor along the lines of wages and hours, mediation and conciliation, welfare work, sustenance of dependents of soldiers and sailors, sanitation, lighting, industrial fatigue, heating and ventilation, drinking water, industrial diseases, home nursing, medical supervision, industrial training for the war emergency, housing, recreation, public health education, women in industry, and protecting unskilled workers. The report gives the complete organization of the Council of National Defense, its advisory commission, and the boards, sections, and committees under the council and advisory commission.

—— *Federal Board for Vocational Education. Circular of information No. 1 for use in training conscripted men for service as radio and buzzer operators (international code) in the United States Army. Bulletin No. 2, October, 1917, 14 pp. Emergency training in shipbuilding. Evening and part-time classes for shipyard workers. Bulletin No. 3, January, 1918. 71 pp. Mechanical and technical training for conscripted men (Air division U. S. Signal Corps). Bulletin No. 4, January, 1918. 47 pp. Training of teachers for occupational therapy for the rehabilitation of disabled soldiers and sailors. Bulletin No. 6, February, 1918, 76 pp. Washington.*

Bulletins Nos. 3 and 4 are largely devoted to outlines of courses of instruction, the latter containing suggested list of test questions to determine proficiency of those completing the courses outlined. The purpose of Bulletin No. 6 is to attempt to meet the very great need for occupational therapeutists, to show what methods Europe has found to be the best, to outline courses for the emergency training of teachers, and to map out the essentials of a complete national program of rehabilitation.

OFFICIAL—FOREIGN COUNTRIES.

AUSTRALIA.—*Report of the resolutions, proceedings, and debates of the conference of representatives of the Commonwealth and State Governments and of the Federal Parliamentary War Committee (together with appendixes) in respect of the settlement of returned soldiers on the land, etc., held at Melbourne, 17th-19th February, 1916. Melbourne* [*1916*]. *60 pp.*

Contains the resolutions agreed to by the conference pertaining to the settlement of returned soldiers on the land, etc., and the minutes of proceedings and report of debates. Appendixes give the report and recommendations of the subcommittee

appointed by the Federal Parliamentary War Committee to consider the question of settling returned soldiers on the land, a statement showing advances made to settlers by the several States, and a statement of approximate requirements of the several States for advances to soldier settlers.

AUSTRALIA (VICTORIA).—*Thirty-ninth annual report on friendly societies. Report of the Government statist for the year 1916, to which is appended valuations of societies, numerical and financial summaries of the returns furnished by the secretaries, etc. Melbourne, [1917]. 47 pp.*

CANADA.—*Commission of Conservation. Rural planning and development: A study of rural conditions and problems in Canada by Thomas Adams, town planning adviser, Commission of Conservation. Ottawa, 1917. 281 pp. Illustrated. Plates. Plans.*

See pages 283 to 286 of this issue of the MONTHLY REVIEW for a digest of this report.

—— —— *Urban and rural development in Canada. Report of conference held at Winnipeg, May 28–30, 1917. Ottawa, 1917. [102] pp.*

This conference was held jointly with other associations interested in an orderly and socially beneficial development of the land and natural resources of Canada. A special session of the conference was devoted to the problems of the returned soldier.

—— (ONTARIO).—*Bureau of Mines. Twenty-sixth annual report, 1917. 366 pp. Maps.*

A notable feature of this report for 1916 is the large increase over 1915 in the number of fatalities and in the fatality rate in mines, metallurgical works and quarries, although each was lower than in 1913 and 1914. In 1916 there were 51 fatal accidents (22 in 1915) and the fatality rate per 1,000 employees was 3.07 (1.51 in 1915). Mention is made of the fact that the report of the workmen's compensation board for 1916 shows that 1,349 claims for compensation by workers in mining and kindred industries were handled by the board during the year, of which 87 claims were for permanent disabilities; that 24,869 days were lost through accidents; that the average age of the injured was 31.1 years; and that the average weekly wages was $18.21.

—— (QUEBEC).—*Provincial Secretary's Department. Bureau of Statistics. Statistical yearbook, 4th year. [1917.] Quebec, 1917. 559 pp.*

FRANCE.—*Ministère de l'Armement et des Fabrications de Guerre. Direction de la Main-d'œuvre. Hygiène et Sécurité des Travailleurs. Protection et utilisation de la Main-d'œuvre Féminine dans les Usines de Guerre. Paris, 1917. 120 pp.*

Circulars and orders issued by the minister of munitions and war manufactures relative to hygiene, safety, and protection of women employed in factories engaged in manufacturing war materials. These have been noted from time to time in the MONTHLY REVIEW.

—— *Ministère du Travail et de la Prévoyance Sociale. Office National des Mutilés et Réformés de la Guerre. Agriculteurs mutilés ne changez pas de métier! Bordeaux, 1917. 23 pp. Illustrated.*

This is a report of an address made by Dr. P. Gires, secretary-general of the bureau for agricultural reeducation, on agriculture as an occupation for wounded and invalided soldiers. It is a plea for a "return to the farm." The volume is illustrated, showing how it is possible for persons having suffered the loss of a limb to manipulate farm tools and agricultural machinery.

GREAT BRITAIN.—*Home Office. Protective clothing for women and girl workers employed in factories and workshops. Prepared by the Home Office from information supplied by H. M. inspectors of factories. London, 1917. 15 pp. Illustrated. Price, 3d. net.*

This pamphlet is noted more fully on pages 217 to 219 of this issue of the MONTHLY REVIEW.

—— —— *Report on the manufacture of silica bricks and other refractory materials used in furnaces, with special reference to the effects of dust inhalation upon the workers. London, 1917. 16 pp. Price, 3d.*

This report is noted on pages 292 to 295 of this issue of the MONTHLY REVIEW.

GREAT BRITAIN.—*Local Government Board. Maternity and Child Welfare. Report on the provision made by public health authorities and volunteer agencies in England and Wales. London, 1917. xvi, 239 pp. Price 6d. net.*

This report summarizes the provision made in each sanitary district of England and Wales with the direct object of promoting the health and physical welfare of expectant and nursing mothers, and of infants and children under school age.

—— *Manuals of emergency legislation. Defense of the realm regulations, consolidated and revised to December 31, 1917. Edited by Alexander Pulling, C. B. London, 1917. xi, 87 pp. Price, 6d. net.*

—— *Medical Research Committee. The mortalities of birth, infancy, and childhood. Special report series, No. 10. London, 1917. 84 pp. Price 1s. 6d. net.*

—— *Ministry of Munitions. Dilution of labor bulletin. A monthly publication primarily for officers working in connection with the D. A. Section (dilution) of the labor supply department. London, 1917, 1918. Illustrated.*

The November and December, 1917, and the January, 1918, issues of the dilution of labor bulletin, giving an excellent idea of the work being done by women in various war industries in Great Britain. The December issue contains an article on The effect of dilution in a shell factory, and one on Shorter hours and increased industrial efficiency. In the January issue is an article on The range of women's work, and one on The problem of women laborers in Wales. Each issue contains a department giving notes on recent developments in the employment of women.

—— —— (DILUTION SECTION). *Process sheets. Nos. 1 to 12 (except No. 5). [London. 1917.] 8, 12, and 16 pp. Illustrated.*

These sheets give a list of the processes in connection with various lines of war work on which women are successfully employed in Great Britain, the industries or occupations covered being aircraft; guns, gun components and wagons; small arms; tool room and precision work; machine tools, small tools, etc.; general engineering; blast furnaces, foundry work, metal rolling, etc.; motor vehicles, motor cycles, and cycles, including motor vehicle engines; chemicals, explosives, and allied industries; woodwork; electrical engineering.

—— —— *Health of Munition Workers Committee. Health of the Munition Worker. Handbook prepared by the Health of Munition workers committee. London, 1917. 138 pp. Illustrated. Price, 1s. 6d. net.*

The purpose of this handbook appears to be to state in brief, categorical, and somewhat dogmatic form the principal steps which must be taken to maintain the health and efficiency of the worker. Much of the material is taken from the 20 memoranda issued by the committee from time to time and which have been noted in the MONTHLY REVIEW as they have appeared. In the introduction, which outlines the general principles involved in improving and maintaining the health of the worker, the central purpose of the handbook is thus briefly suggested: "Without health there is no energy, without energy there is no output. More important than output is the vigor, strength, and vitality of the nation." The book shows that it is to the mutual interest of both employer and employee to conserve the health of the latter, for "without health the worker can not earn a decent livelihood for himself and his family or produce output for the employer and the nation." The chapter titles indicate the scope of the work: Relation of fatigue to industry; hours of labor; Sunday labor and night work; lost time, incentive to work; a healthy factory environment; washing facilities and baths; seats, clothing, etc.; the industrial canteen; sickness and accident; protection of the eyesight; industrial diseases; welfare supervision; outside factory conditions. There are illustrations and diagrams, and particular mention should be made of two designs for industrial canteens.

GREAT BRITAIN.—[*Ministry of Munitions.*] *Schedule of protected occupations for men employed on admiralty, war office or munitions work, or in railway workshops. London, 1918. 40 pp.*

—— *National Health Insurance. Report on the administration of the national health insurance during the years 1914–17. London, 1917. 345 pp. Price, 1s. 6d.*

The last report issued was for the year 1913–14, and the present report covers the three-year period since that time, the data included presumably being for the years ending, respectively, on June 30, although the report does not so state. The report is dated November, 1917, and describes the work of the national health insurance joint committee, and the national health insurance commissions for England, Scotland, Ireland, and Wales, respectively. The accomplishments of the three years are best shown by the following statement of the amount of the various benefits paid by approved societies in the United Kingdom:

AMOUNT SPENT BY APPROVED SOCIETIES ON SICKNESS, MATERNITY, AND DISABLEMENT BENEFITS IN THE UNITED KINGDOM, DURING 1913 TO 1916.

Year.	Sickness benefits.		Maternity benefits.		Disablement benefits.		Total.
	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.	
1913	$31,898,384	83.8	$6,158,828	16.2	(1)	.....	$38,057,212
1914	35,089,762	81.3	7,154,981	16.6	$935,244	2.2	43,179,987
1915	30,678,134	74.6	6,418,417	15.6	4,095,885	10.0	41,192,436
1916	28,190,326	70.7	6,133,094	15.4	5,576,955	14.0	39,900,375
Total	125,856,606	77.5	25,865,320	15.9	10,608,084	6.5	162,330,010

[1] No disablement benefits paid in 1913.

—— *Privy Council. Committee for scientific and industrial research. Report for the year 1916–17. London, 1917. 63 pp. Price 3d net.*

—— *Reports to the Local Government Board on public health and medical matters. (New series No. 86). Dr. Frank Seymour's report to the Local Government Board on the occurrence of lead poisoning in the urban district of Guisborough and its relation to the public water supply. London, 1914. 21 pp.*

NETHERLANDS.—*Directie van ben Arbeid. Arbeidersbudgets Gedwrende de Crisis. Uitgegeven voor rekening van het Department van Landbouw, Nijverheid en Handel. The Hague, 1917. 141 pp. Charts.*

This volume reports the result of an investigation of cost of living in 1917, compared with 1914. According to the tables given, the weekly expenditure for food for a family of 6 persons, father, mother, and 4 children, increased during the period under observation from 7.56 florins ($3.04) to 16.03 florins ($6.44), and for a family consisting of father and mother and 8 children, from 19.88 florins ($7.99) to 41.34 florins ($16.62). The expenditure for shoes and clogs (wooden) increased 123.5 per cent and 200 per cent, respectively, for the family of 10 persons. The investigation is based on 13 family budgets.

SPAIN.—*Ministerio de Fomento. Dirección General de Comercio, Industria y Trabajo. Conferencia de Seguros Sociales. Madrid, 1917.*

This volume gives the text of various papers submitted to, and reports of the proceedings of, a conference on social insurance held at Madrid, Spain, October 24 to 31, 1917, in compliance with royal decree of July 29, 1917. The various classes of insurance, industrial accident, agricultural accident, old age, invalidity, unemployment, maternity, etc., are each discussed under appropriate titles. One chapter is devoted to social insurance systems in operation in Spain.

UNOFFICIAL.

ADAMS, HENRY C. *Description of industry: An introduction to economics. New York, Holt, 1918. 270 pp.*

Attempts to produce a simple and yet truthful description of the structure and life of the modern business world, as a background for vocational training.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *Annals, vol. 73. Justice through simplified legal procedure. September, 1917. 251 pp.*

In October, 1916, the Phi Delta Phi Club, consisting of graduates in New York and vicinity of the legal fraternity of Phi Delta Phi, appointed a Committee of Nine, under the chairmanship of Henry W. Jessup, J. D., for the purpose of considering what changes in the constitution, statutes, and rules operative in the State of New York are essential to the simplification of practice and greater efficiency in the administration of justice. The report of this committee, accompanied by a number of papers by various writers, on the improvement of judicial machinery, is the subject of the important volume under review. The committee states that it is for the particular purpose of having its defects revealed that the report is given publicity and presented as an attempt "to frame and formulate a concise and generic scheme of legal and judicial efficiency, adaptable to the evolution of the community and its needs and yet sufficiently rigid to preserve from impairment those things which are vital and necessary to the durability of the judicial system."

By courtesy of the owners of the copyright, Roscoe Pound's bibliography on procedural reform is printed as an exhibit of the report.

AMERICAN FEDERATION OF LABOR. *Report of the proceedings of the 37th annual convention held at Buffalo, N. Y., November 12-24, inclusive, 1917. The Law Reporter Printing Co., Washington, D. C., 1917. 482 pp.*

A statement of the more important features of this convention was given in the MONTHLY REVIEW for January, 1918, pages 139–145.

ANDREWS, IRENE OSGOOD, AND HOBBS, MARGARET A. *Economic effects of the war upon women and children in Great Britain. Carnegie Endowment for International Peace. New York, 1918. 190 pp.*

The authors trace in detail the effect of the War upon women industrially, from the first period of unemployment and distress through the gradually increasing demand for their services up to July, 1917, when over a million and a quarter of women were directly replacing men. A study is included of the methods of training and dilution practiced in the munitions trades, the wages question is discussed at length, and sections are devoted to hours of work, to the safety, health and comfort of the workers, and to the attitude of the men's unions toward the employment of women. On the whole, the authors are optimistic as to the results of the changes.

The effect of the War upon the position of children is treated in less detail, as fewer data are available. The relaxation of age and educational restrictions upon their employment is noted, and an estimate is quoted that the number prematurely put to work may have reached 600,000. A seldom mentioned feature of the situation is brought out —the removal of boys and girls under 17 from their homes to places where their labor is more urgently needed, a plan which has given rise to numerous and serious difficulties in the way of supervision, recreation and living conditions outside of work hours. A marked increase in juvenile delinquency is noted. In general the effect of the changing industrial conditions seems to have been far more detrimental to children than to women. The hopeful feature is that the public is beginning to realize the value of children as a national asset, and an attempt has already been begun to put through legislation which will raise English child labor standards to a higher level than has been attained at any previous period.

BAILEY, PEARCE, M. D. *Efficiency and inefficiency: A problem in medicine. Reprinted from Mental Hygiene, 50 Union Square, New York City, April, 1917, pp. 196–210.*

A study on the relation of the study and treatment of mental diseases to industrial and general efficiency.

BELEVSKY, A. AND VORONOFF, B. (*Correspondants de Rousskia Viedmosti de Moscou.*) *Les organisations publiques russes et leur rôle pendant la guerre, avec une préface by M. E. Denis, Professeur à la Sorbonne. 1917. Hatchette et Cie. Paris.*

In his foreword to this important sociological work Prof. Denis lays stress upon the capacity of the Russians to renounce their individual existence in hours of exaltation to live the life of collective thought. He says that nowhere else do individuals submit themselves more completely and with less resistance to the impulse of the crowd.

This volume was written at the beginning of 1917 but was not published until after the overthrow of the Empire. Had the book appeared sooner it would have seemed prophetic. The authors depict vividly the social conditions which, in their opinion, made imperative the abolition of the old régime. In this résumé of the official reports of the Zemtos (the provincial councils) and the municipal councils one is brought in close touch with the spirit of the Russian people. The achievements of these various public associations in meeting the war crises in the face of the hostility of the bureaucracy are remarkable. It is shown how in the breakdown of imperial authority the provincial and municipal councils, the cooperatives, the health services, and the workmen's organizations took hold of things and accomplished what appeared almost impossible. Very interesting is the history of the work of these associations in first aid to the wounded, hospital foundations, sanitary services, the struggle with epidemics, the furnishing of the civilian population and the army with food and clothing, the transformation and development of manufacturing, and the mobilization of the small home industries.

BEMAN, LAMAR T. [COMPILER] *Selected articles on the compulsory arbitration and compulsory investigation of industrial disputes. Third edition, revised and enlarged. Debaters' handbook series. New York, H. W. Wilson Co., 1917. 223 pp.*

BOSTON CHAMBER OF COMMERCE. *The milk question in New England: An investigation of the cost of producing milk in New England and its distribution in Boston, with recommendations. Dec. 31, 1917. 57 pp.*

BREWER, JOHN M. *The vocational-guidance movement: Its problems and possibilities. New York, Macmillan, 1918. 333 pp. Bibliography.*

By the head of the department of psychology and education, Los Angeles State Normal School.

BRONNER, AUGUSTA F. *The psychology of special abilities and disabilities. Boston, Little, Brown & Co., 1917. 269 pp.*

An attempt to discuss, in view of school and vocational misfits, "practical aspects of special abilities and disabilities, to offer in detail methods of attacking problem-cases, and to present various types, both (a) of particular disabilities in those who have normal general ability and (b) of particular abilities in those who are below normal in general capacities." Describes the tests—Binet-Simon and others—used in the study of various cases.

BROTHERHOOD OF LOCOMOTIVE FIREMEN AND ENGINEMEN. *Argument and brief submitted on behalf of locomotive firemen and hostlers. Hearings of Federal Wage Commission, Washington, February, 1918. 285 pp. Charts.*

For a review of this document, see pages 188 to 192 of this issue of the MONTHLY REVIEW.

BROWN, UDETTA D. *The houses of Amsterdam, New York, with some notes on the prevalence of tuberculosis; investigation and report for the Amsterdam Committee on Tuberculosis of the State Charities Aid Association, 1917. 61 pp.*

A study of housing conditions in a city of about 31,000 inhabitants. The worst factor found was the dark room. The basement dwelling is fairly widespread. The

multiple house is gaining in prevalence. All of these, furthermore, are indicated as factors in the spread of tuberculosis.

CARNEGIE UNITED KINGDOM TRUST. *Report on the physical welfare of mothers and children. Scotland. Vol. 3. East Port, Dunfermline, 1917. 652 pp. Illustrated. Maps.*

Volumes 1, 2, and 4, together with a brief statement of the purpose of the survey, were noted in the MONTHLY REVIEW for January, 1918, p. 246.

CHAPPELL, EDGAR L., ED. *The Welsh Housing Yearbook, 1916. Cardiff, South Wales, Garden Cities and Town Planning Assn., [n. d.] 96 pp.*

The first issue of the yearbook designed to provide information for the practical solution of the post-war housing problem in Wales. Other issues will follow. The contents are as follows: Layout plan of Barry Garden Suburb; South Wales Garden Cities and Town Planning Association; The housing problem in Wales; Conclusions of Welsh Land Inquiry Committee on rural housing in Wales; Layout plans of Wrexham and Ely garden villages; What town planning means; Municipal housing in Wales; Municipalities and housing reform; Cooperation in housing; Public utility societies in Wales; War and the housing problem; What a garden city is; The garden village method of estate development; Cottage building after the war; Building societies and housing in South Wales; Town planning in the Welsh valleys; The acquisition of small dwellings; Miners and the housing problem.

COLE, G. D. H. *Self-government in industry. London, Bell, 1917. 329 pp.*

Some general suggestions for industrial reconstruction, written "in the hope of helping the labor movement in the formulation of a constructive policy, and of enlisting the sympathies of all those to whom a capitalistic and militaristic imperialism is abhorrent."

The author makes the statement that "the capitalists have no intention of a permanent return after the war to prewar conditions: The war has given them their chance * * * they have a coherent policy which they are even now putting into effect, while the workers are still at the most only groping their way toward a constructive alternative."

COMMONWEALTH CLUB OF CALIFORNIA. *Industrial unrest. Transactions, Vol. XII, No. 11. San Francisco, 1917. Pp. 481–529.*

Addresses and discussion on the following subjects: Trade agreements as an aid to industrial peace, Some economic factors in the problem of social unrest, The high cost of living and industrial unrest, and Industrial relations from the human viewpoint.

CORN EXCHANGE NATIONAL BANK. PHILADELPHIA. *Processes in which women can do the work of enlisted men. Philadelphia, [1918]. 29 pp.*

A prefatory note announces that information in this pamphlet covering the processes and positions in which women can be used has been compiled from pamphlets issued by the British Government. These pamphlets are noted on page 311 of this issue of the MONTHLY REVIEW.

CRAIK, WILL W. *Outlines of the history of the modern British working-class movement. London District Council of the National Union of Railwaymen [1916]. 120 pp.*

Based on a series of articles by the same author in the Railway Review in 1916, written to serve in place of a textbook for students of the National Union of Railwaymen classes.

EHRHARD, AUGUSTE. *Les oeuvres de l'Hotel de Ville pendant la guerre. Lyon, Rey, 1916. 198 pp. Illustrated.*

An account of the various branches of relief work which have been carried out since the beginning of the war by the city of Lyon, including municipal hospitals; vocational schools for the wounded; the provision of linen and comforts for soldiers; aid for prisoners of war; searching for lost soldiers and for French and Belgian refugees;

the care of the families of soldiers and of the children of widowed soldiers; aid for refugees, for interned civilians, and for the people of Alsace-Lorraine; and municipal sewing rooms and home work for women.

ELY, RICHARD T., AND RALPH H. HESS, CHARLES K. LEITH, AND THOMAS NIXON CARVER. *The foundations of national prosperity: Studies in the conservation of permanent national resources. New York, Macmillan, 1917. 378 pp.*

The four authors, in the order named, contribute the following papers: I. Conservation and economic theory; II. Conservation and economic evolution; III. Conservation of certain mineral resources; and IV. Conservation of human resources.

FARRAR, C. B. *The problem of mental disease in the Canadian army. Reprinted from Mental Hygiene, 50 Union Square, New York City, July, 1917, pp. 389–391.*

Treats of the classification and group treatment of the nervous and mental cases among soldiers invalided to Canada, comprising 10 per cent of all.

GIDE, CHARLES. *Les sociétés coopératives de consommation. Paris, 1917. 354 pp. Third edition.*

A review of the history of the consumers' cooperative movement in the different countries of Europe, and a study of the organization, aims, and methods of consumers' cooperative societies at the present time.

JENKS, JEREMIAH W., AND LAUCK, W. JETT. *The immigration problem: A study of American immigration conditions and needs. Fourth edition, revised and enlarged. New York and London, Funk & Wagnalls, 1917. 605 pp. Map and diagrams.*

[JOINT COMMITTEE ON LABOR PROBLEMS AFTER THE WAR.] *The position of women after the war. 20 pp. The problem of unemployment after the war. 7 pp. The restoration of trade-union conditions in cases not covered by the munitions acts. 9 pp. The restoration of trade-union customs after the war. 14 pp. London, Cooperative Printing Society, 1917.*

These four pamphlets are issued by the Joint committee on labor problems after the war, composed of representatives of the parliamentary committee of the trade-union congress, the executive committee of the labor party, the management committee of the general federation of trade-unions, and the war emergency workers' national committee. The first pamphlet listed is a report of the joint standing committee of industrial women's organizations presented to the joint committee on labor problems after the war; the second pamphlet is a memoranda on the prevention of unemployment and the necessity for the revision of the unemployment insurance acts; the third pamphlet contains a statement of the position with recommendations for enforcement; the fourth pamphlet contains a statement and analysis of the Government guarantees.

JONES, ROBERT. *Notes on military orthopedics. Published for British Red Cross Society. London, New York, Toronto, and Melbourne, Cassell, 1917. 132 pp. Illustrated.*

A reprint of a series of articles in the British Medical Journal in 1916, by the inspector of military orthopedics, British Army Medical Service. An attempt to formulate rules for the correction of deformities resulting from war injuries.

KIRKLAND, JOHN. *Three centuries of prices of wheat, flour, and bread. War prices and their causes. London, J. G. Hammond & Co. (Ltd.), 1917. 64 pp.*

"This work is not issued for entertainment, but only as a handy source of reference to the many who do, or who must, make themselves familiar with relative prices." It contains a statement of the chief factors which throughout the 317-year period have entered into the prices of wheat, flour, and bread, and includes a table giving the prices of these three commodities from the year 1600 to and including the first six months of the year 1917, together with brief notes of events likely to influence prices at any particular year. There is a chapter on "An appreciation of the main factors in the rise of prices and freights (1914–1917)," and also a chapter on "War time bread prices," covering the present war. In this connection a table is given

showing that the price per 4-pound loaf in London in August, 1914, was 5½d. (11.2 cents), while in August, 1917, it had risen to 1s. (24.3 cents).

LAND UNION, LONDON. *The housing question as affected by recent legislation: Reasons for repeal of Part 1 of the Finance (1909–1910) act, 1910. 2d. ed. rev. Published by the Land Union, London, 1917. 24 pp.*

Relates to the so-called Lloyd-George budget which placed heavy taxes upon land values and unearned increments in land, and advocates the repeal of those land duties.

LAROUSSE MÉDICAL ILLUSTRÉ DE GUERRE. *By Dr. Galtier-Boissiére, with the collaboration of others. Paris, Librairie Larousse, [1917]. 336 pp. Illustrated.*

A supplement of the Larousse Medical Encyclopedia. While this work carries the title of "medical encyclopedia of the war," it should not be concluded that it treats exclusively of military surgery and medical practice especially due to the war. The practice herein described is applicable to all individuals under all circumstances. The work gives information as to the functional reeducation of the wounded, and contains numerous illustrations of processes of treatment and appliances of prosthesis.

LAUCK, W. JETT. *Cost of living and the War: An analysis of recent changes. Cleveland, The Doyle & Waltz Printing Co., 1918. 196 pp.*

This volume is a summarization and analysis of official and authoritative data bearing upon the cost of living with special reference to the families of wage earners. Part I is a brief analysis and interpretation of the data contained in Part II, which consists primarily of reprints from official publications of retail and wholesale price data and the results of original investigations and studies relative to the budgets of workingmen's families.

LEAGUE FOR PREVENTIVE WORK [BOSTON]. *Food supply in families of limited means: A study of present facts of the food problem in Boston families, by six welfare agencies, members of the League for Preventive Work. Boston, December, 1917. 24 pp.*

A cooperative study based on 200 schedules recording the food purchases during one week of representative families known to one or more of the agencies making the investigation. The material is grouped as follows: 1. General description of the families studied; 2. Character of their diet as shown by food purchases during the selected week (July 8–14, 1917); 3. Adequacy and economy of the diet in relationship to size and circumstances of the family; 4. Conclusions and recommendations.

MCKILLOP, M., AND A. D. *Efficiency methods. New York, Van Nostrand, 1917. 215 pp. Illustrated.*

A brief account of "certain methods recently suggested for increasing efficiency in industry"—in short, the Taylor system—for the information of English business men.

MAINE STATE FEDERATION OF LABOR. *Proceedings of the fourteenth annual convention at Bar Harbor, June 5, 6, and 7, 1917. Portland, Bryson & Welch, [1917]. 71 pp.*

MERIAM, LEWIS. *Principles governing the retirement of public employees. Published for the Institute for Government Research. New York and London, Appleton, 1918. 477 pp. Bibliography.*

The object sought in preparing this book has been primarily "to set forth the principal economic, social, administrative, and financial questions involved in establishing a retirement system and then, in so far as possible in limited space, to summarize the more important arguments for and against alternative lines of action."

The author does not undertake to outline an ideal retirement system, but suggests that it is necessary to decide approximately what proportion of, say, the average salary of the last few years of service it seems desirable to provide as a superannuation benefit at the compulsory age of retirement; to have the actuary determine, in respect to entrants at each age, what proportion of salary would have to be set aside each year to provide for an annuity of that amount; to decide upon a maximum for such contribution, and to provide that persons entering late in life should pay no more than that amount and should have their benefit correspondingly decreased. The per-

centages of salary to be deposited would be worked out so as to produce the desired benefit only in the average case.

If the service has low paid employees some special device, in the opinion of the author, must be adopted, since one-half active salary would not take care of those whose wages are at or near the minimum of subsistence. To meet this requirement the ideal superannuation benefit might be regarded as composed of two parts: (1) A certain fixed sum and (2) a certain portion of salary, the two making the total allowance. For example, in a community where the minimum of subsistence of an aged man and his wife was approximately $600 a year and the wages of the lowest paid employees of the retirement age were $720 the actuary might be asked to determine, for the different ages at entrance, what percentage of salary would have to be set aside to provide, in the average case, a retirement annuity of $400 plus one-third the average salary of the last five years. The deposits to the account of the employee would then be made on that basis. Under normal advancement the employee in the $720 class would on retirement have provided himself with an annuity of $640 ($400 plus one-third of $720), whereas the employee in the $900 class would have $700, the employee in the $1,200 class $800, the employee in the $1,800 class $1,000, and the employee in the $2,400 class $1,200. Each, however, will have exactly what his contributions and those in his behalf will pay for, and these results will be produced only in the average case. Those who advance less rapidly will get larger benefits in proportion to their salaries; those who advance more rapidly, smaller benefits.

This device suggests the use of the salary scale to make the percentage deductions uniform throughout service, thereby avoiding high retents from late promotions and the combination of the fixed sum and the proportion of salary in arriving at the percentage deduction to provide suitable minimum allowances. It has seemed to the author that along this line lies the solution of the superannuation retirement problem rather than along the line of benefits directly proportional to salary. The important thing is to connect benefits and the amount available to pay for them, rather than to connect salary and benefits and to run the risk of endangering the financial stability of the system, or interfering with changes, and of dealing unfairly by the less highly paid classes.

NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS. *Eye hazards in industrial occupations. A report of typical cases and conditions, with recommendations for safe practice. 130 E. 22 St., New York, Nov., 1917. 145 pp. Illustrated.*

This report is noted on pages 295 to 298 of this issue of the MONTHLY REVIEW.

NATIONAL SAFETY COUNCIL. *Proceedings of sixth annual safety congress, New York, September 11–14, 1917. Part I: General, business, and health service section, public safety division, etc. 414 pp. and index.*

Contains important papers on the problems of organization, education, and safeguarding in accident prevention work; health instruction, hospitals, dispensaries, and first aid, the Carrel-Dakin method of treating infections, the visiting nurse in industry, and other subjects.

PRICE, GEORGE M. *The union dental clinic: A cooperative, self-supporting modern dental clinic for the members of the International Ladies Garment Workers' Union, established by the Joint Board of Sanitary Control in the Cloak, Suit and Skirt and the Dress and Waist Industries. New York, 1918. 6 pp. Illustrated.*

A statement of the operation of this clinic from its installation May 7, 1917, to the close of the same year.

SAGAMORE SOCIOLOGICAL CONFERENCE. *Proceedings of tenth meeting, Sagamore Beach, Mass., June 27–29, 1917. Wm. C. Ewing, Sec., 985 Washington St., Boston Mass. 87 pp.*

Includes, among other addresses, Conserving our human resources, by Agnes Nestor, and Cooperative enterprises, by James P. Warbasse.

STRUBBING, R. F. [REPORTER]. *Appeals from munitions tribunals.* [*Great Britain.*] *Vol. 1, 9 pamphlets, May 12, 1916, to Jan. 19, 1917. Vol. 2, 9 pamphlets, Mar. 15, 1917, to Feb. 8, 1918. London and Tonbridge, The Whitefriars Press (Ltd.).*

SWIFT AND COMPANY. *Reply to questions submitted July 23, 1917, by the Federal Trade Commission. Chicago, 1917. 35 pp. Diagrams.*

The production, marketing, costs, prices, profits, etc., of meat products in the United States.

TECHNICAL JOURNALS, LTD. *Houses for workers. Technical Journals (Ltd.)* [*London, 1917. 100 pp.*] *Plates. Plans.*

A series of selected examples of houses suitable for working-class families both in rural and in urban districts. Plans are shown, with costs and descriptions, of a general selection of cottages for rural and urban workers; a colony of houses erected by the Government for munitions workers near Woolwich, England, and an estate of houses at Kennington, London.

UNITED MINE WORKERS OF AMERICA. *Minutes of twenty-sixth consecutive and third biennial convention, Indianapolis, January 15–26, 1918.*

WESTERN EFFICIENCY SOCIETY. *The human factor in industrial preparedness: Complete report of the proceedings of the national conference, Chicago, May 23–25, 1917. 212 pp. Illustrated.*

Papers by Harrington Emerson, John P. Frey, Frank B. Gilbreth, Charles R. Van Hise, and a number of others.

WOMEN'S EDUCATIONAL AND INDUSTRIAL UNION. *Thirty-ninth annual report. 1916–17. Boston, 1918. 41 pp.*

Notwithstanding the uncertain business conditions, this report shows an increase in the volume of constructive work done by the union during the year ended September 30, 1917.

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WOMAN STREET RAILWAY EMPLOYEES.

BY BENJAMIN M. SQUIRES.

In the present world crisis women must do some of the work heretofore done by men. Already many of the occupations previously restricted to male employees have been opened to women, and as the War progresses the need will become more imperative and the practice probably more prevalent. Women are eager to do their share in the War and for that very reason are likely to accept, without weighing the consequences, any new employment offered, especially when appeal is made to their patriotism to take up the burdens dropped by the drafted men. It is important, therefore, that careful inquiry be made to determine the suitableness of such employment for women workers as to (1) shop and work conditions, (2) the nature of the work, (3) the hours of work, and (4) the wages paid women and men in the employment. It is also desirable to ascertain whether women are being employed because men can not be had or because women will accept a lower wage than men.

In this country woman car cleaners and ticket agents and choppers have been employed by street railway companies in some cities even in normal times, but the car crews have always heretofore been men. Quite recently, however, perhaps inspired in part by the accounts from other warring countries, women have been taken on as street car conductors. Information is not available as to the total number of women thus employed throughout the country or the number of cities in which the experiment is being tried. In New York City and Brooklyn, however, women have been employed as conductors in the operation of surface street cars since December, 1917, and as subway guards in Brooklyn since October, 1917. The Hudson & Manhattan Railway Co. employs a number of woman guards on its subway trains, as well as woman porters and ticket agents at the stations, and the Second Avenue and Queens surface lines have recently placed woman conductors on their cars.

The plan to increase the number of women on the surface lines of New York City and Brooklyn "as rapidly as housing accommoda-

tions for women can be provided at the various depots," together with the large number of woman applicants for this work, emphasizes the need of a careful consideration of this particular problem in "dilution of labor." In this article are given the first findings of an investigation which has just been made by the United States Bureau of Labor Statistics into the hours and working conditions of women employed by the New York Railways Co. and the Brooklyn Rapid Transit Co. in the operation of their lines.

On February 15, 1918, the New York Railways Co. had in its employ 452 woman conductors,[1] or approximately 30 per cent of all conductors employed. The Brooklyn Rapid Transit Co. on the same date had 138 woman conductors [2] on its surface cars and 297 woman guards,[3] or carmen, and conductors on its subway trains. These were 5.6 and 21.7 per cent, respectively, of the total number of conductors and guards employed.

In addition to the above, the Brooklyn Rapid Transit Co. employed at its subway-elevated stations 929 woman ticket agents out of a total of 1,002 in this occupation and 50 woman porters out of a total of 180. As stated previously, however, the use of woman ticket agents is not an innovation. Woman porters are virtually cleaners about the stations, and in neither position does the employment of women present any unusual difficulties.

Obviously it will be impossible within the scope of this article to discuss all of the many ramifications of street railway or rapid transit operation which, in a greater or less degree, affect employees. It is necessary, however, to keep a number of points in mind.

The transit lines of any large city must operate continuously day and night, with the familiar rush hours and high peaks in the number of cars and passengers followed by low levels in the number of passengers carried and of cars operated. The problems of the operating department are twofold: First, so to arrange schedules as to have cars out at the proper time, yet to avoid moving empty cars unnecessarily; second, to arrange car schedules into what is familiarly known as "runs" (day's work) for employees. These runs may be "straight"—that is, with no intermission between the beginning and the end of the day's work—or they may be "swing" runs, on which an employee has one or more intervals of time between periods of duty. In addition to these regular runs it is usually necessary to have a number of regularly scheduled "trippers" of a few hours' duration to take care of rush periods.

[1] Not including 35 students.

[2] Not including 41 students.

[3] Not including women employed regularly in other occupations who worked a portion of their time as guards.

To provide for this variable service and at the same time to replace employees absent from all or portions of their regular runs and those leaving the service, it is necessary to maintain an extra list of employees not assigned to regular runs. The number of extras employed depends upon traffic conditions, the percentage of daily absences, and the general policy of the company. In normal times, in Greater New York approximately 20 to 25 per cent of all conductors and slightly less of all motormen are extras.

Regular runs are usually chosen by seniority of service, those oldest in the service having the first choice of vacant runs. The extra list is also on a seniority basis. When vacancies occur in the regular list by resignation, discharge, or other cause, those at the head of the extra list go to the foot of the regular list and take their turn in the choice of runs.

Without going further into modifications of the above procedure, it will be apparent that the extras get what is left. If employees with regular runs are to be absent the following day, the runs are posted and employees on the extra list sign up for these runs in order of seniority. When thus assigned, the extras acquire the status of regulars for this day and know definitely what their hours are to be. However, in case extra service is required or some one does not put in an appearance, it may become necessary, even for those assigned to regular runs, to work portions of other runs or trippers. Those on the extra list not assigned to runs for the following day are required to report and "cover the list" for unforeseen absences or emergency service, unless and until released by the dispatcher.

The above explanation has seemed necessary in order to make clear the conditions under which woman conductors now work or may be expected to work. All of them begin, of course, as extras, after a short period of instruction. On February 15, 1918, practically all of the 138 woman conductors employed on the surface lines of the Brooklyn Rapid Transit Co. were extras. Of the 297 women employed as guards and conductors on the subway lines of the same company, 40 were extras. Of the 452 woman conductors employed by the New York Railways Co., 119 were extras. All of the male conductors employed by the New York Railways Co. had regular runs.

Both of the above companies emphasize their impartial treatment of woman employees. The women take their turn with male employees both as extras and as regulars. As regulars some women must have afternoon and night runs, some must have "night hawks" or "owls" running into the morning hours, and some will draw day runs, either "straights" or "swings." As extras, through their position on the extra list, they may be able to choose for each day's work runs

fairly uniform as to duration or as to time of beginning and ending. But it is inevitable that a considerable number of those on the extra list will not be thus favorably situated. Even if the list rotates, that is, those at the bottom one week being at the top the next, much of the work must be irregular, at least in the arrangement of hours from week to week. It will be apparent, too, that women must be in the service for some time before their position on the list of regulars will entitle them to much choice in the selection of runs.

A better idea of the hours of service of woman conductors and guards may be had from the following examples of hours actually worked during a period of seven days. These are not intended to be averages nor to represent the worst or the best of hours, but are types selected more or less at random to show the variety of hours making up a week's work.

HOURS OF SERVICE OF FOUR WOMAN STREET RAILWAY CONDUCTORS EMPLOYED BY THE NEW YORK RAILWAYS CO. DURING SEVEN DAYS ENDING FEB. 16, 1918.

Day.	Duration of periods of work on each specified day.						Time worked.		Time within which work was completed.	
	On at—	Off at—	On at—	Off at—	On at—	Off at—				
							H.	m.	H.	m.
Sunday	12.56p.	3.32p.					2	36	2	36
Monday	12.58p.	3.25p.	5.13p.	11.35p.			8	49	10	37
Tuesday	12.30p.	3.21p.					2	51	2	51
Wednesday	6.22a.	9.11a.	11.52a.	3.11p.	5.41p.	8.00p.	8	27	13	38
Thursday	6.18a.	8.59a.	11.52a.	3.11p.	5.41p.	8.10p.	8	29	13	52
Friday	11.05a.	12.14p.	1.12p.	2.51p.	4.52p.	7.39p.	5	35	8	34
Saturday	6.20a.	9.07a.	11.28a.	3.00p.	5.41p.	8.12p.	8	50	13	52
Total							45	37	66	00
Sunday	1.50p.	4.30p.	6.34p.	1.43a.			9	49	11	53
Monday	1.52p.	5.02p.	6.51p.	1.33a.			9	52	11	41
Tuesday	12.49p.	3.46p.	5.44p.	1.11a.			10	24	12	22
Wednesday	12.48p.	4.22p.	6.19p.	1.18a.			10	33	12	30
Thursday	12.48p.	4.05p.	5.46p.	1.27a.			10	58	12	39
Friday	12.45p.	4.05p.	5.56p.	1.05a.			10	29	12	20
Saturday	12.44p.	3.09p.	5.44p.	2.07a.			10	48	13	23
Total							72	53	86	48
Sunday										
Monday	11.48a.	3.45p.	5.47p.	12.26a.			10	36	12	38
Tuesday	1.48p.	4.35p.	6.19p.	1.39a.			10	07	11	51
Wednesday	2.30p.	6.43p.					4	13	4	13
Thursday										
Friday	6.53p.	12.11a.					5	18	5	18
Saturday	12.47p.	4.14p.	5.23p.	12.55a.			10	59	12	08
Total							41	13	46	08
Sunday	5.32p.	7.18p.	8.26p.	1.16a.	1.28a.	5.45a.	10	53	12	13
Monday	5.45p.	11.34p.	2.06a.	6.13a.			10	02	12	28
Tuesday	12.48p.	5.11p.	7.10p.	12.57a.			10	10	12	09
Wednesday	5.50p.	12.04a.	2.25a.	7.09a.			10	58	13	19
Thursday	5.22p.	11.27p.	1.04a.	5.22a.			10	23	12	00
Friday	12.31p.	3.38p.	6.13p.	2.02a.			10	56	13	31
Saturday	11.34a.	4.45p.	7.19p.	1.07a.			10	59	13	33
Total							74	21	89	13

HOURS OF SERVICE OF WOMAN EMPLOYEES OF THE BROOKLYN RAPID TRANSIT CO. DURING SEVEN DAYS ENDING FEB. 14, 1918.

Two guards—subway-elevated lines.

Day.	Duration of periods of work on each specified day.						Time worked.[1]		Time within which work was completed.	
	On at—	Off at—	On at—	Off at—	On at—	Off at—				
							H.	m.	H.	m.
Friday	2.20p.	12.08a.					9	48	9	48
Saturday	2.20p.	1.40a.					11	20	11	20
Sunday	2.28p.	12.24a.					9	56	9	56
Monday	2.30p.	12.30a.					10	00	10	00
Tuesday	2.20p.	12.08a.					9	48	9	48
Wednesday	2.20p.	12.08a.					9	48	9	48
Thursday	2.20p.	12.08a.					9	48	9	48
Total							70	28	70	28
Friday	6.00a.	9.20a.	9.25a.	7.21p.			13	16	13	21
Saturday	6.00a.	9.20a.	9.25a.	8.25p.			14	20	14	25
Sunday	9.41a.			8.05p.			10	24	10	24
Monday	5.54a.	3.54p.	4.30p.	7.45p.			13	15	13	51
Tuesday	6.45a.	9.00a.	9.25a.	7.21p.			12	11	12	36
Wednesday	6.15a.	9.20a.	9.25a.	7.21p.			13	01	13	06
Thursday	6.00a.	9.20a.	9.25a.	3.55p.			9	50	9	55
Total							86	17	87	38

Four conductors—surface lines.

Friday	5.50a.	12.20p.	3.30p.	7.00p.			10	00	13	10
Saturday	5.42a.	9.37a.	11.42a.	5.46p.			9	59	12	04
Sunday	12.04p.	3.40p.	5.52p.	12.09a.			9	53	12	05
Monday	1.42p.	3.20p.	4.35p.	12.44a.			9	47	11	02
Tuesday	1.42p.	3.20p.	4.35p.	12.44a.			9	47	11	02
Wednesday	4.12p.	7.17p.	7.54p.	2.51a.			10	02	10	39
Thursday	4.12p.	7.17p.	7.54p.	2.51a.			10	02	10	39
Total							69	30	80	41
Friday	7.02a.	1.26p.	4.12p.	7.02p.			9	14	12	00
Saturday	11.55a.	3.14p.	5.54p.	1.35a.			11	00	13	40
Sunday	12.14p.	3.34p.	5.34p.	12.59a.			10	45	12	45
Monday	2.17p.	4.03p.	4.40p.	12.53a.			9	59	10	36
Tuesday	4.05p.	12.15a.					8	10	8	10
Wednesday	10.34a.	2.08p.	4.29p.	6.29p.			5	34	7	55
Thursday	6.53a.	1.43p.	4.51p.	9.25p.			11	24	14	32
Total							66	06	79	38
Friday	7.39a.	2.50p.	5.28p.	8.29p.			10	12	12	50
Saturday	6.59a.	9.21a.	11.46a.	7.32p.			10	08	12	33
Sunday										
Monday	8.05p.	10.24p.	1.45a.	7.13a.			7	47	11	08
Tuesday	8.05p.	10.24p.	1.45a.	7.13a.			7	47	11	08
Wednesday	7.30a.	2.10p.	4.11p.	7.41p.			10	10	12	11
Thursday	7.44a.	2.50p.	5.04p.	8.37p.			10	39	12	53
Total							56	43	72	43
Friday	2.14p.	6.59p.	7.34p.	1.03a.			10	14	10	49
Saturday	1.02p.	5.12p.	7.34p.	1.03a.			9	39	12	01
Sunday	12.15p.	6.15p.	8.18p.	12.32a.			10	14	12	17
Monday	2.14p.	6.59p.	7.34p.	1.03a.			10	14	10	49
Tuesday	2.14p.	6.59p.	7.34p.	1.03a.			10	14	10	49
Wednesday	2.14p.	6.59p.	7.34p.	1.03a.			10	14	10	49
Thursday	2.14p.	6.59p.	7.34p.	1.03a.			10	14	10	49
Total							71	03	78	23

[1] Thirty to forty minutes are allowed off duty for meals on straight runs. This time is paid for and the period is not shown on the daily record of work performed.

The hours that employees are actually engaged in operating the cars give but little notion of the suitableness of the employment for women. The "within" time, or the period between the time of reporting at the barn and the time when they are released for the day gives a much better idea of the demands of the occupation upon the time of the employees. For the most part the time between "swings" or portions of the day's work is simply dead time with the choice of loafing about the car barn or on the street. If suitable waiting and rest rooms and comfort stations were provided a working day for woman employees of nine hours' actual work to be completed within 10 hours could be regarded with some degree of complacency as not being necessarily injurious to health. That such an ideal arrangement of hours does not prevail is evident from the following table, which shows the "completed within" time of the day's work during a period of seven days.

TIME WITHIN WHICH THE DAY'S WORK OF WOMAN EMPLOYEES WAS COMPLETED DURING A PERIOD OF SEVEN DAYS.

Number of hours within which day's work was completed.	Brooklyn Rapid Transit Co.				New York Railways Co.		Total.	
	Surface lines.		Subway lines.					
	Number of runs.	Per cent.	Number of runs.	Per cent.	Number of runs.	Per cent.	Number of runs.	Per cent.
Under 6	55	8.2	227	14.9	139	6.5	421	9.7
6 and under 6½	9	1.3	25	1.6	12	.6	46	1.1
6½ and under 7	4	.6	9	.6	11	.5	24	.6
7 and under 7½	5	.7	19	1.2	17	.8	41	.9
7½ and under 8	4	.6	22	1.4	20	.9	46	1.1
8 and under 8½	3	.4	66	4.3	20	.9	89	2.1
8½ and under 9	5	.7	38	2.5	23	1.1	66	1.5
9 and under 9½	8	1.2	89	5.8	22	1.0	119	2.8
9½ and under 10	16	2.4	64	4.2	26	1.2	106	2.5
10 and under 10½	36	5.4	60	3.9	34	1.6	130	3.0
10½ and under 11	75	11.2	26	1.7	55	2.6	156	3.6
11 and under 11½	63	9.4	58	3.8	134	6.3	255	5.9
11½ and under 12	60	9.0	65	4.3	270	12.7	395	9.1
12 and under 12½	90	13.4	120	7.9	413	19.4	623	14.4
12½ and under 13	103	15.4	180	11.8	392	18.4	675	15.6
13 and under 13½	75	11.2	210	13.8	255	12.0	540	12.5
13½ and under 14	42	6.3	122	8.0	192	9.0	356	8.2
14 and under 14½	5	.7	53	3.5	72	3.4	130	3.0
14½ and under 15	4	.6	31	2.0	12	.6	47	1.1
15 and under 15½	.....	.....	12	.8	1	(1)	13	.3
15½ and under 16	.....	.....	7	.5	.....	.....	7	.2
16 and under 16½	.....	.....	4	.3	1	(1)	5	.1
16½ and under 17	1	.1	4	.3	1	(1)	6	.1
17 and under 17½	1	.1	3	.2	1	(1)	5	.1
17½ and under 18	1	.1	1	.1	2	.1	4	.1
18 and under 18½	1	.1	4	.3	.....	.....	5	.1
18½ and under 19	.....	.....	2	.1	1	(1)	3	.1
19 and under 19½	.....	.....	1	.1	.....	.....	1	(1)
19½ and under 20	.....	.....	1	.1	.....	.....	1	(1)
20 and under 20½	.....	.....	1	.1	.....	.....	1	(1)
20½ and under 21	1	.1	.....	.....	.....	.....	1	(1)
21½ and under 22	.....	.....	.....	.....	.....	.....	.....	(1)
22 and under 22½	2	.3	.....	.....	.....	.....	2	(1)
22½ and under 23	1	.1	.....	.....	.....	.....	1	(1)
23 and over	.....	.....	2	.1	1	(1)	3	.1
Total	670	100.0	1,526	100.0	2,127	100.0	4,323	100.0

[1] Less than one-tenth of 1 per cent.

Thus, on the New York Railways Co.'s lines, 13.5 per cent of the total days worked by woman conductors during a period of seven days were completed in less than 10 hours, whereas 62.9 per cent required 12 hours and over within which to complete the day's work. On the surface lines of the Brooklyn Rapid Transit Co., 16.1 per cent of the total days worked by woman conductors during a period of seven days required less than 10 hours within which to complete the day's work, and 48.5 per cent required 12 hours and over. On the subway-elevated lines of the Brooklyn Rapid Transit Co. 36.5 per cent of the total days worked by woman guards and conductors required less than 10 hours within which to complete the day's work, and 50 per cent required 12 hours and over.

The duration and time of occurrence of the waiting periods in the day's work are summarized in the following table:

TIME OF OCCURRENCE AND DURATION OF WAITING PERIODS IN THE DAY'S WORK OF WOMAN EMPLOYEES DURING A PERIOD OF SEVEN DAYS.

New York Railways Co.

Time of occurrence of waiting period (time off duty between parts of day's work).	Number of workdays with a waiting period (time off duty between parts of day's work) of—												Total.
	Under 1 hr.	1 and under 2 hrs.	2 and under 3 hrs.	3 and under 4 hrs.	4 and under 5 hrs.	5 and under 6 hrs.	6 and under 7 hrs.	7 and under 8 hrs.	8 and under 9 hrs.	9 and under 10 hrs.	10 and under 11 hrs.	11 and under 12 hrs.	
7 a. m. and before 8 a. m	1		1		1								3
8 a. m. and before 9 a. m	2	12	18	38	25		1	8	7				111
9 a. m. and before 10 a. m	19	43	73	56	19	3	15	29	4				261
10 a. m. and before 11 a. m	2	22	30	6	2	6	6	3					77
11 a. m. and before 12 m	4	43	44	7	1	1	1	2					103
12 m. and before 1 p. m	12	84	120	26	10	1							253
1 p. m. and before 2 p. m	7	102	75	24	2								210
2 d. m. and before 3 p. m	23	90	188	37	8								346
3 p. m. and before 4 p. m	14	196	165	44	3								422
4 p. m. and before 5 p. m	25	155	86	8	1								275
5p. m. and before 6 p. m	18	50	7	4	1								80
6 p. m. and before 7 p. m	6	25	6		1								38
7 p. m. and before 8 p. m	5	10	2										17
8 p. m. and before 9 p. m	2	3	2										7
9 p. m. and before 10 p. m	1	1	3		3								8
10 p. m. and before 11 p. m	1	1	5	2									9
11 p. m. and before 12 p. m		22	16										38
12 p. m. and before 1 a. m	5	13											18
1 a. m. and before 2 a. m	2	1	1										4
2 a. m. and before 3 a. m			1	2									3
Total	149	873	843	254	77	11	23	42	11				2,283

TIME OF OCCURRENCE AND DURATION OF WAITING PERIODS IN THE DAY'S WORK OF WOMAN EMPLOYEES DURING A PERIOD OF SEVEN DAYS—Concluded.

Brooklyn Rapid Transit Co. (subway-elevated lines).

Time of occurrence of waiting period (time off duty between parts of day's work).	Number of workdays with a waiting period (time off duty between parts of day's work) of—												Total.
	Under 1 hr.	1 and under 2 hrs.	2 and under 3 hrs.	3 and under 4 hrs.	4 and under 5 hrs.	5 and under 6 hrs.	6 and under 7 hrs.	7 and under 8 hrs.	8 and under 9 hrs.	9 and under 10 hrs.	10 and under 11 hrs.	11 and under 12 hrs.	
6 a. m. and before 7 a. m	4	3											7
7 a. m. and before 8 a. m	1												1
8 a. m. and before 9 a. m	1		2	1	7	2	16	56	16	3	2	1	107
9 a. m. and before 10 a. m	8	3	31	9	1	23	195	148	8		3		429
10 a. m. and before 11 a. m	1	18	11		15	100	62	8			1		216
11 a. m. and before 12 m	1			10	19	15							45
12 m. and before 1 p. m			1	4	2								7
1 p. m. and before 2 p. m		1											1
2 p. m. and before 3 p. m				5	10								15
3 p. m. and before 4 p. m	4	5	3		2			1					15
4 p. m. and before 5 p. m	5	1	1	2									9
5 p. m. and before 6 p. m		1	1										2
6 p. m. and before 7 p. m		1											1
7 p. m. and before 8 p. m	1	1											2
8 p. m. and before 9 p. m	1												1
12 p. m. and before 1 a. m			1				1						2
3 a. m. and before 4 a. m		1											1
4 a. m. and before 5 a. m											1		1
Total	27	35	51	31	56	140	274	213	24	3	7	1	862

Brooklyn Rapid Transit Co. (surface lines).

7 a. m. and before 8 a. m	3	1											4
8 a. m. and before 9 a. m	3	1	2	4	2		1						13
9 a. m. and before 10 a. m		4	26	16	1								47
10 a. m. and before 11 a. m	5	3	28	8	2								46
11 a. m. and before 12 m	1	6	21	3	6	1	1						39
12 m. and before 1 p. m	5	9	14	23	6								57
1 p. m. and before 2 p. m	1	8	45	32	4								90
2 p. m. and before 3 p. m	1	32	44	12									89
3 p. m. and before 4 p. m	7	27	21	2									57
4 p. m. and before 5 p. m	15	7	16										38
5 p. m. and before 6 p. m	8	13	14	1									36
6 p. m. and before 7 p. m	15	16	4	1									36
7 p. m. and before 8 p. m	8	9	1										18
8 p. m. and before 9 p. m	3	3											6
9 p. m. and before 10 p. m	2	1											3
10 p. m. and before 11 p. m	2	4		3									9
11 p. m. and before 12 p. m			2										2
12 p. m. and before 1 a. m	3	2	1	1									7
1 a. m. and before 2 a. m	1												1
3 a. m. and before 4 a. m				1									1
Total	83	146	239	107	21	1	2						599

Neither "completed within" time nor waiting periods show the arrangement of hours with reference to night work. This can be brought out only by considering the hours of beginning and ending work. The following table classifies the working days of all woman employees during a period of seven days by hours of beginning and ending work.

NUMBER OF WORKDAYS OF WOMAN EMPLOYEES WHICH BEGAN AND

New York Railways Co. (surface lines.)

Beginning time.	Number with ending time—A. M.											
	12 and before 1.	1 and before 2.	2 and before 3.	3 and before 4.	4 and before 5.	5 and before 6.	6 and before 7.	7 and before 8.	8 and before 9.	9 and before 10.	10 and before 11.	11 and before 12.
2 and before 3 a. m.							1	2				
4 and before 5 a. m.							1					
5 and before 6 a. m.							[1] 2	1	3	3		2
6 and before 7 a. m.									12	11	6	7
7 and before 8 a. m.	2	1								1	1	
8 and before 9 a. m.												2
9 and before 10 a. m.											2	
10 and before 11 a. m.	9	1				1						1
11 and before 12 m.	59	24	5	1								
12 m. and before 1 p. m.	147	173	43	3								
1 and before 2 p. m.	51	128	38	3								
2 and before 3 p. m.	8	19	2									
3 and before 4 p. m.	4	5	2									
4 and before 5 p. m.	4	7	1									
5 and before 6 p. m.	2	5				5	3	1				
6 and before 7 p. m.	2	2	2			8	5	2				
7 and before 8 p. m.	1	5				5	12	5	6	2		
8 and before 9 p. m.							1	1	6	6		
9 and before 10 p. m.	1									1		
12 and before 1 a. m.						1						
Total	290	370	93	7		20	25	12	27	24	9	12

Brooklyn Rapid Transit Co. (surface lines.)

2 and before 3 a. m.							1					
4 and before 5 a. m.												
5 and before 6 a. m.												
6 and before 7 a. m.				[2] 1		[2] 1			[1] 3	3	6	1
7 and before 8 a. m.		[2] 2					[2] 1		2	1	1	1
8 and before 9 a. m.												
9 and before 10 a. m.												
10 and before 11 a. m.												
11 and before 12 m.	10	5										
12 m. and before 1 p. m.	27	6										
1 and before 2 p. m.	15	14	8									
2 and before 3 p. m.	14	18	1									
3 and before 4 p. m.	3	10	20	1								
4 and before 5 p. m.	3	3	16	6	1					1		
5 and before 6 p. m.												
6 and before 7 p. m.	2											
7 and before 8 p. m.	1		1			1			1			
8 and before 9 p. m.								3		2		
9 and before 10 p. m.							1					
10 and before 11 p. m.							1		2	1		
12 and before 1 a. m.							1					
Total	75	58	46	8	1	2	5	3	8	8	7	2

Brooklyn Rapid Transit Co. (subway-elevated lines.)

1 and before 2 a. m.												
2 and before 3 a. m.												1
3 and before 4 a. m.										3		
4 and before 5 a. m.							2	3	2	3		
5 and before 6 a. m.	1							1	4	2	5	1
6 and before 7 a. m.	3	2						[1] 3	16	23	1	3
7 and before 8 a. m.	2	1							19	17	4	3
8 and before 9 a. m.												
9 and before 10 a. m.												
10 and before 11 a. m.	13	3										
11 and before 12 m.												
12 m. and before 1 p. m.												
1 and before 2 p. m.	2	1	2									
2 and before 3 p. m.	23	9	4									
3 and before 4 p. m.	45	21	13	2								
4 and before 5 p. m.	26	16	5	2								
5 and before 6 p. m.	5	9	1	1								
6 and before 7 p. m.					1				1			
7 and before 8 p. m.				1					2			
Total	120	62	25	6	1		2	7	44	48	10	8

[1] Including 1 workday which ended the morning of the following day.

ENDED AT EACH CLASSIFIED TIME DURING A PERIOD OF SEVEN DAYS.

New York Railways Co. (surface lines.)

Number with ending time—P. M.												
12 and before 1.	1 and before 2.	2 and before 3.	3 and before 4.	4 and before 5.	5 and before 6.	6 and before 7.	7 and before 8.	8 and before 9.	9 and before 10.	10 and before 11.	11 and before 12.	Total.
												3
1				1			1					4
		1	1	5	33	36	98	3			1	189
	2	2	6	12	27	214	217	89	4			609
2		1	2	1	3	30	88	40	13		1	186
	1				1	1	8	18	2			33
						1	7		3		2	15
2		1			3	3	6	2	1	5	16	51
	1		2	2	1	3	3	2	2	8	24	137
		3	8	1	4	5	8	7	9	6	33	450
			2	2	6	2	5	5	5	2	14	263
			1	1		4	1	1	3	1	3	44
					1	5	1	3	1	1	1	24
						1	3	2		1		19
							1				1	18
									1	1	3	26
										1	1	38
											1	15
												2
												1
5	4	8	22	25	79	305	447	172	44	26	101	2,127

Brooklyn Rapid Transit Co. (surface lines).

												1
		1	2	1	1	1						6
	1		1	4	10	23	6					45
2				3	3	37	47	28	6		1	142
	1			1	1	17	29	65	9			131
	2		1			1	5	11	4			24
								6	8	1		15
	1					1		3	5	6	2	18
2			2		1			3	3	8	14	48
		1	1			2	4	2		3	10	56
						1	2		1		3	44
						2	3	1	1			40
						1		1	2	1		39
					1		1	1	2	2	2	39
								1	1		1	3
								1			1	4
												4
												5
												1
												4
												1
4	5	2	7	9	17	86	97	123	42	21	34	670

Brooklyn Rapid Transit Co. (subway-elevated lines).

									1			1
												1
	1											4
		1	3	1			1	3	3			22
2	1		29	14	5	8	39	12	2			126
5			42	14	20	70	264	113	25	5	1	610
1		2	14	16	8	27	115	81	24	3		338
1						2	2		1			6
			4	2				1				7
			1	2		1	1	6	1		2	30
								1				1
			1		1	3	1	4				10
						1	5	2				13
						1	6	12	4	1	5	65
					8	9	11	21	5	4	40	178
						6	13	6	2	2	2	80
						1	4	2	1		2	26
											2	4
								1				4
9	2	3	94	49	42	129	462	265	69	15	54	1,526

[2] Workday ended the morning of the following day.

Thus, of 2,127 days worked by woman conductors on the cars of the New York Railways Co., 993, or 46.6 per cent, began between midnight and 8 a. m.; 968, or 45.5 per cent, ended between 6 p. m., and 10 p. m.; 887, or 41.7 per cent, ended between the hours of 10 p. m. and 4 a. m. Of 670 days worked by woman conductors on the surface lines of the Brooklyn Rapid Transit Co., 326, or 48.7 per cent, began between midnight and 8 a. m.; 348, or 51.9 per cent, ended between the hours of 6 p. m. and 10 p. m.; 242, or 36.1 per cent, ended between the hours of 10 p. m. and 4 a. m. Of 1,526 days worked by woman guards and conductors on the subway lines of the Brooklyn Rapid Transit Co., 1,102, or 72.2 per cent, began between midnight and 8 a. m.; 925, or 60.6 per cent, ended between the hours of 6 p. m. and 10 p. m.; 282, or 18.5 per cent, ended between the hours of 10 p. m. and 4 a. m.

Of even greater significance, however, in view of the fact that all woman conductors and guards begin work as extras and do not have regular runs for a considerable period of time, is the irregularity in the time of beginning and ending work as between successive days. Even on regular runs, the Saturday and Sunday schedules differ from the Monday to Friday schedules in beginning and ending time. The following table shows the variation in the time of beginning and ending work for both regular and extra woman street railway employees during a period of seven days:

VARIATION OF THE BEGINNING TIME AND THE ENDING TIME OF WORKDAYS OF WOMAN STREET CAR EMPLOYEES IN NEW YORK CITY.

Length of variation.	Number whose beginning time and ending time of workdays during one week varied the classified number of hours.					
	Brooklyn Rapid Transit surface lines.		Brooklyn Rapid Transit subway-elevated lines.		New York Railways Co.	
	Beginning time.	Ending time.	Beginning time.	Ending time.	Beginning time.	Ending time.
Under 1 hour	27	17	152	61	164	88
1 and under 2 hours	15	16	49	52	66	75
2 and under 3 hours	7	6	17	35	42	57
3 and under 4 hours	10	13	12	23	24	27
4 and under 5 hours	5	5	6	26	18	17
5 and under 6 hours	13	15	3	18	25	15
6 and under 7 hours	8	11	7	18	31	31
7 and under 8 hours	6	10	7	5	17	19
8 and under 9 hours	12	4	16	8	4	11
9 and under 10 hours	13	12	21	12	2	15
10 and under 11 hours	5	6	10	22	5	20
11 and under 12 hours	2	4	4	9	1	13
12 and under 13 hours	2	3	7	11	2	7
13 and under 14 hours	5	4	2	7	1	1
14 hours and over	1	5	1	7	1	7
Total	131	131	314	314	403	403

It will be observed that of 131 woman conductors employed on the surface lines of the Brooklyn Rapid Transit Co. during all or a portion of one week, the variation in beginning time was less than one hour for 27 conductors; one hour and under two hours for 15 conductors; two hours and under three hours for 7 conductors. For 82 conductors the variation in time of beginning work was three hours and over.

The irregularity in time of ending work was quite as marked. Only 17 of the 131 woman conductors quit work within less than one hour of the same time each day. For 92 conductors the variation in time of ending work was three hours and over.

Those who advocate the employment of women as street-car conductors have given scanty consideration to irregularity of hours, to "within" time and to night work, or else they regard these as more than compensated by the comparative lightness of the work. It is necessary, however, to take into account the nervous strain resulting merely from riding for hours at a time on a car that is constantly starting and stopping and that of handling crowds at rush hours. On many cars the conductor is obliged to be on his feet constantly and the principle has been clearly established that a woman can not work at employment requiring constant standing without seriously endangering her health. Moreover, the conductor is exposed to cold, damp, and draughts, even on the best type of inclosed-vestibule and center-door cars. On the closed-vestibule car there is added the strain of opening and closing the door at each stop. On the open summer car, in such common use, the conductor is required to pass constantly along the running board, clinging to a swaying car with one hand and collecting fares with the other. Cars other than "pay as you enter" require often that the conductor force a way through the crowded car to collect fares. The danger of injury, resulting seriously, to a woman doing this work is by no means negligible. However, woman conductors must operate these cars or the type of car must be changed at great expense.

The point has been made repeatedly by the companies during the investigation, that even when women have a choice, they frequently select night runs. At this time the cars are, of course, less crowded and the work less strenuous except, perhaps, during the after-theater rush hours on certain lines. Some of the women have remarked that they preferred the night runs because it left them the day free to do other things. Others with families have said that the night runs enable them to look after the children and prepare the meals during the day. The disastrous consequences of employing women on night work to enable them to work all day for their families have been so thoroughly demonstrated in other industries that it needs no further

demonstration in street-car operation. Lack of sufficient rest must very soon so lessen the vitality that the woman is not only unfit for street railway service but unable to resume her former place either in the home or in industry. There should be added to this a consideration of the dangers to which a woman is conceivably exposed in having to go home unattended, sometimes through practically deserted streets, at hours of the night when police protection is least.

Quite apart from the question of hours or severity of work is that of adequate waiting and toilet rooms at the car barns. The barns are the starting places of the cars. Here the movement of cars is directed, orders are issued to employees, and the run sheet for each day is posted. Here are located the waiting rooms for the employees, with such facilities for rest, comfort, and amusement as it is the policy of the company to provide.

The introduction of women necessitates that some provision be made to house them at these barns. The adequacy of these provisions must be determined in part by well-defined standards of sanitation and comfort, and in part by equally well-defined principles of decency and privacy. Obviously a separate waiting and rest room must be provided for women employees. It must be considered, too that since the strain upon women is greater than upon men in this work, opportunity for rest and relaxation must be provided in even greater measure than for men. The need of adequate rest-room facilities for all women off duty becomes more apparent when it is taken into consideration that employees often live too far from the car barns to make it practicable for them to go home between portions of the day's work. The immediate neighborhood of the car barns is seldom inviting. Even if the waiting period comes at a convenient time or is of sufficient duration to permit woman employees to shop or to go to places of amusement, it is necessary for them to change to street dress and again to uniform or work dress. As a consequence a great many of the women prefer to spend the "time off" at the car barns.

It has been stated previously that woman conductors were being employed on the surface lines in New York City and Brooklyn as rapidly as housing facilities could be provided. In order to determine just what these facilities were, an inspection was made of all the car barns, both surface and subway, where women are employed.

On February 21, 1918, accommodations had been provided for women at eight of the car barns of the New York Railways Co. and at one additional point to supplement the facilities at one of the barns. At all of these points one room had been set aside for the woman employees. For the most part these rooms were quite private, but at one barn the room was separated from the foreman's

office only by a partition extending about half way to the ceiling. At another barn the entrance to the manager's office was through the women's room. All of the rooms had one or more outside windows and were furnished either with steel or wooden lockers, straight-backed chairs, tables, and, with one exception, with wooden benches. Hot and cold water was provided in five of the rooms. In three rooms only cold water was available, and in one room it was necessary to use the facilities provided in the foreman's room. Wash basins, soap, and towels were provided at six of the rooms. Toilet accommodations for the exclusive use of women were found at all places where women were employed. Two of these were small and dark, but all were clean and well kept. Lunch rooms were provided at three barns, open in each case to both sexes. At two barns telephones had been installed to notify women of their runs or to call them for extra work. At one barn the toilet-room equipment included four shower baths.

In general it may be said that the rooms were adequate in size and were kept clean, though some were not particularly inviting, and none may be said to satisfy approved standards of comfort and convenience. A matron or janitress was in charge of each room and was expected to be in constant attendance. In addition the company employs a traveling inspector to whom the women may make complaints or suggestions. Women are forbidden to loiter in any other place than the rest rooms, except for 10 minutes just preceding the leaving of their cars. This rule is not rigidly enforced at all times, however.

A less favorable situation was found in the accommodations provided on the Brooklyn Rapid Transit surface lines, though it should be said that arrangements are being made for more adequate facilities. At one barn there was no waiting and rest room for the exclusive use of women, though a separate toilet was provided. A room was in process of being remodeled for the use of women. This room was located on the ground floor alongside the car tracks that enter the barn. A lunch room was provided at this barn and used by both men and women. The entrance to the lunch room was through the men's waiting room.

At another barn a small room was used temporarily by the women. This room was crowded at the time of inspection. The permanent room to be provided at this barn is located just off the men's club and billiard room, the latter being the entrance to the women's room. No windows are provided for this room, the only light coming from the glass top of a ventilating shaft about 5 by 5 feet.

At still another barn a women's waiting and rest room was provided in a building formerly used as a store. The room had a glass front and, being on the ground floor, was not very private. The

toilet was small and in bad condition. It had previously been kept locked and the women had the use of a toilet in the office located across the street. The room was furnished with a lounge, chairs, and tables, and was heated by a coal stove. A matron was in charge. No lunch room was provided at this barn, and the restaurants in the neighborhood were not very desirable.

One of the remaining three surface-line barns where women were employed had a waiting room located on the ground floor so close to the surface and elevated tracks that rest was almost impossible. The room was entirely apart from the rooms provided for the men, however, and though rather long and narrow—about 9 by 30 feet—was well equipped and was in charge of a matron. Apart from the noise, the most objectionable feature was the location of the toilet which was at the end of the room facing the street, the only means of ventilation being a window opening on the street.

At the other two barns of the surface lines the accommodations were more adequate. The toilets were clean and well kept. Hot and cold water, wash basins, towels, and soap were provided. At one of the rooms a matron was in charge; at the other the woman car cleaners were expected to look after the room.

On the subway-elevated lines of the Brooklyn Rapid Transit Co. women work from four stations. At one station a car standing on the elevated track is used as a crew room for both men and women. This was furnished with the same kind and number of seats as the cars in operation. The only toilet room for women was the one provided for the general public, and at the time of inspection this was in need of repair and was locked. No lunch room was provided.

At another station a car standing on the subway track is used as a crew room for both men and women. A separate toilet room, located conveniently near, was provided for the exclusive use of woman employees. The company does not maintain a lunch room but plenty of good lunch rooms are within reasonable distances from the station.

At one of the two remaining stations both men and women were crowded into the dispatcher's room two flights below the ground level. The women were expected to use the toilet provided for the general public and this was only moderately well kept. Plans have been made for a women's room at this station but it will be some time before the room is ready. At the other station the women's room was separated from the dispatcher's room only by a partition extending about half way to the ceiling. The women's room served as a passageway to the men's room and to the dispatcher's office. The room contained lockers but they were used by the men. No toilet facilities were available, the pipes being frozen. There was no wash basin and no drinking water.

The accommodations at some of the stations, as indicated in the brief description given above, can not be passed over by a mere enumeration of present shortcomings or by an outline of plans later to be carried out. To omit a condemnation of the failure to provide for at least the personal needs of woman employees in advance of their employment would be an evasion of responsibility. Whatever the demand may be for women in the street railway industry, it can not be sufficient to justify their employment under the conditions set forth.

The nature of street railway employment makes it very difficult at best to provide adequate toilet facilities. At each car barn the question was raised as to how long women were required at any one time to be away from toilet facilities provided by the company. At the barns of the New York Railways Co. it was stated that this time never exceeded 30 minutes. The same statement was made at the surface-line barns of the Brooklyn Rapid Transit Co. It was further stated at the barns of both companies that if the car crew found it necessary to stop longer than the car schedule would allow, the crew of the car just behind would take charge of the car vacated and that this would in no way be held against the time or quality of work of the employee. In practice, however, this is not so simple as it appears and several conductors complained that it was not always convenient to take care of personal needs. Obviously at those barns where toilet facilities have not been provided, or where they are not kept in usable condition, women must be subjected to much embarrassment and discomfort. Women at one barn complained that they had to depend upon private homes in the vicinity and that these had finally been closed to them. One extreme case was cited of a woman conductor who was forced to proceed to the end of the line and then use the men's toilet in a saloon. Even under the most favorable conditions, it is doubtful whether the nature of the industry makes it possible properly to safeguard women employees in this respect.

Reference has previously been made to lunch-room facilities either at the car barns or in their vicinity and what has been said of the difficulties in the way of attending properly at all times to personal needs applies as well to the securing of proper food at regular intervals. Every one has observed the familiar sight of motormen or conductors hastily gulping down cold sandwiches while operating the car. Sometimes the cold clamminess of the lunch is relieved by a cup of hot coffee. Lunch rooms in the vicinity of the car barns are often so dirty and the food so bad as to be a real menace to health. No person, male or female, whether or not an employee of the company, should be obliged to patronize these places. Because of the conditions pointed out it is imperative that clean, wholesome lunch rooms be provided by the street railway companies as a means of maintain-

ing the health and efficiency of their employees, especially their woman employees. At best many crew employees must eat hastily and at irregular hours, oftentimes while running their cars.

The question of the dress or uniform of woman street railway employees has not been mentioned previously because it is after all of but trifling significance in comparison with other problems. If anything at all were to be said, it would be in favor of the regulation of apparel of women in this and in other industries. It might be stated in passing, however, that the woman conductors employed by the New York Railways Co. wear a regulation uniform consisting of an all-wool shirt, and a coat, trousers, puttees and cap of khaki. The company furnishes these at a cost of $5.75 to the employee. The women provide their own heavy coats and other apparel. The Brooklyn Rapid Transit Co. require their woman conductors to wear a dark skirt furnished by the employee, and a cap and heavy coat, both dark blue in color, supplied by the company at a total cost to the employee of $16.10.

Both the New York Railways Co. and the Brooklyn Rapid Transit Co. submit evidence showing that an unusually large number of male employees have left their service. The latter company, at least, has lowered its standard of physical requirements for male applicants. Both insist that they have been unable to secure a sufficient number of suitable men to operate their cars. A considerable number of employees have been taken by the selective draft, others have left for voluntary service, still others have undoubtedly left because of higher wages in other industries. It is with reference to those who leave for higher wages in other industries that the wage scale of street railway employees is significant. Much has been made of the fact that woman employees do the same work as men, under the same conditions and at the same wages. It is denied that women are employed to fill the easy jobs or to lower the wage scale of men. However, the wage rates in most industries have advanced very greatly, while the rates of street railway employees in New York City and Brooklyn—and probably elsewhere—have advanced much less rapidly. First-year conductors are now paid 27 cents per hour on the New York Railways Co.'s lines and on the surface lines of the Brooklyn Rapid Transit Co. First-year subway conductors employed by the latter company are paid 26 cents per hour; first-year guards, 24 cents. In 1914 the rate of first-year surface-car conductors was 24 cents; of first-year subway conductors, 23 cents; of first-year subway guards, 20 cents. There is thus an advance in four years to first-year surface-car conductors of 12½ per cent; to first-year subway conductors of 13 per cent; to first-year guards of 20 per cent. The rates for the years 1914 and 1918 and the percentage of increase are shown in the following tables:

WAGE SCALE OF CONDUCTORS EMPLOYED BY THE NEW YORK RAILWAYS CO.[1]

Period of service.	Rate per hour.		Per cent of increase in 1918 over 1914.
	1914	1918	
First year	$0.24	$0.27	12.5
Second year	.25	.30	20.0
Third and fourth years	.26	.31	19.2
Fifth year	.27	.31	14.8
Sixth to tenth year	.27	.32	18.5
Eleventh to fifteenth year	.27	.33	22.2
Sixteenth year and after	.27	.34	25.9

[1] Runs of less than 8 hours on duty were paid for as 8 hours; over 8 and under 9 hours, paid for as 9 hours; over 9 and under 10 hours, paid for as 10 hours; over 10 hours, credited to the nearest 6 minutes, but paid for in even hours, the fraction of an hour being carried to the next 7-day pay-roll period. Guaranty of $12.25 per week to men who worked some time every day in 1914; no guaranty in 1918.

WAGE SCALE OF EMPLOYEES OF THE BROOKLYN RAPID TRANSIT CO.

Conductors—surface lines.[1]

Period of service.	Rate per hour.		Per cent of increase in 1918 over 1914.
	1914	1918	
First year	$0.24	$0.27	12.5
Second year	.24	.30	25.0
Third year	.25	.30	20.0
Fourth year	.26	.31	19.2
Fifth year	.26	.32	23.1
Sixth year	.27	.32	18.5
Seventh to ninth year	.27	.33	22.5
Tenth year	.28	.33	17.9
Eleventh to fifteenth year	.28	.34	21.4
Sixteenth year and after	.28	.35	25.0

Conductors and guards—subway lines.[2]

Conductors:			
First year	$0.23	$0.26	13.0
Second year	.23	.27	17.4
Third year	.24	.28	16.3
Fourth year	.25	.29	16.0
Fifth year and after	.25	.30	20.0
Guards:			
First year	.20	.24	20.0
Second year	.21	.25	19.0
Third year	.22	.25½	11.4
Fourth and fifth years	.22½	.26	15.6
After fifth year	.23	.26	13.0

[1] Monday to Friday runs of less than 10 hours on duty were generally paid for as 10 hours. Saturday and Sunday runs of less than 7 hours were paid for actual time; over 7 and under 8 hours, paid for as 8; over 8 and under 9 hours, paid for as 9; over 9 and under 10 hours, paid for as 10; over 10 hours, paid for actual time. Extras who reported regularly as required were guaranteed $1.50 per day in 1914 and $1.75 per day in 1918.

[2] Approximately all conductors and guards operating regular runs of less than 6 hours were paid for 7 or 8 hours; of over 6 and under 7, paid for 8; of over 7 and under 8, paid for 9; of over 8 and under 9, paid for 9¼ or 9½; of over 9, paid for 9¾ or 10 hours. Reporting time of 10 minutes for employees starting from yards and 30 to 40 minutes allowed off duty on straight runs for meal periods were paid for.

It will be observed that the highest increase is 25.9 per cent. The increase in the cost of living for the same period has advanced about 44.7 per cent in New York City.[1] This, coupled with the prevailing

[1] See the results of the investigation into "Cost of living in the New York shipbuilding district," MONTHLY REVIEW, April, 1918, pp. 151, 152.

high rates of wages in other industries, is at least a contributing factor in the shortage of male labor for street railway work. Women are being paid the same wages as men in the industry. Wages have not actually been lowered by the introduction of women into the employment but quite probably wages have been prevented from rising as much as they otherwise would. The consequences may be far reaching depending upon the attitude of the women thus employed and the attitude of the company. In a measure, too, the attitude of the public and of male employees in the industry toward the introduction of women will determine the extent of the practice, the conditions of employment, and its consequences.

Public sentiment is rarely manifested except when inconvenience is threatened or occasioned. To those who use the street cars the introduction of women meant the operation of a greater number of cars and consequently better transit facilities. Attracted at first by the novelty of woman conductors and inclined somewhat sentimentally toward the idea of women doing their "bit" and releasing men for service, the general public seems now to have complacently accepted the situation with little thought of the consequences that may result and with less knowledge of the conditions under which woman conductors work. A woman conductor, though still an object of interest, no longer excites any considerable comment.

In order to ascertain the attitude of women workers in other industries toward the employment of women in the street railway industry, personal interviews were had with representatives of three women's leagues having headquarters in New York city.

The attitude of the Consumers' League of New York City as expressed by its representatives is that women should receive identical pay for identical work, but they stated that there are industries which women ought not to enter and work that they ought not to attempt. No objection was made to women being used in the operation of street cars, but the belief was expressed that there should be protective legislation regulating the conditions under which women work.

The attitude of the Women's Trade Union League, is clearly defined in its bill introduced into the New York State Legislature and now known as the "Lockwood" bill. This bill, which has the indorsement of the New York State Child Labor Committee and of the Consumers' League, provides that—

> No female employee over the age of 16 years shall be required, permitted or suffered to work in or in connection with any * * * steam, elevated, subway or surface electric railways * * * more than six days or 48 hours in any one week or more than 8 hours in any one day unless for the purpose of making a shorter workday of some one day of the week; or before 7 o'clock in the morning or after 10 o'clock in the evening of any day.

An organization known as the Women's League for Equal Opportunity has recently come into being in New York City. This league, which was organized in January, 1918, has now 75 members. It asserts that women should demand "equal rights, equal opportunities, equal responsibilities, equal work, equal pay"; there should be no law that would forbid a woman from doing anything a man does; a woman should be her own judge as to whether she has the strength to do the work or the endurance to work long hours; therefore women should have the opportunity to work as street railway conductors under the same conditions that men work.

Men employees on the cars at the time women were introduced were inclined to treat it as a joke or a new fad of the women. Those who took it seriously looked upon it as a move to take away their jobs or to keep wages down. The fact that women take their turn with men and do not have the easy runs has tended to allay somewhat the fear that women would be used to drive the men out or to break down standards. The ticket agents of the Interborough Rapid Transit Elevated Lines, however, voluntarily agreed to work 12 hours per day instead of 10 if women were not put on to make up the shortage. Organized male labor, it may be said, is not opposed to the introduction of women, providing standards are maintained.

No canvass has been made of woman employees to ascertain why they responded in such large numbers when word went out that the street railway companies would use women on their cars. With some it was undoubtedly economic stress, with others novelty, with others the seizing of the opportunity to enter an industry previously closed to them; still others have been attracted by the prospect of earning more than in other occupations open to women. A few have no doubt been actuated by patriotic motives and the appeal to be of service. From the large number of applicants, the companies have been in a position to choose those most apt and physically able to remain in service. The age limits are 21 to 45, and a large percentage of applicants is rejected. A careful investigation is made by the company of the record of every applicant in order to weed out those who, for any cause, would not be desirable and permanent employees.

Comparative figures are not available to show the relative stability of women in this work. From December 4, 1917, to February 15, 1918, however, the New York Railways Co. took on 532 women, not including those who were students on the latter date. During the same period 100 women left the service of the company. The surface lines of the Brooklyn Rapid Transit Co. took on 258 woman conductors between the dates December 14, 1917, and February 15, 1918, not including those who were students on the latter date. During this period 79 left the service. The subway lines of the

Brooklyn Rapid Transit Co. took on 348 guards during the period October 24, 1917, to February 15, 1918, not including students on the latter date, and 51 left the service of the company. This indicates that in spite of the opportunity afforded the companies for careful selection, a rather high percentage of women have either found the work disappointing and have left the service or were found to be unsatisfactory and were discharged.

From the facts brought out in this report it must be evident to any thinking person that it is practically impossible to make the conditions of street railway employment even tolerably endurable to woman employees and that the operation of street cars is one of the last occupations into which women should be lured or forced. There are thousands of clerical and factory positions now filled by men which could be filled just as well or better by women. Common sense dictates that women be first placed in those positions where conditions are most favorable and most readily adaptable for their employment. If the exigencies of war make it necessary to put women into the less desirable employments such as street railway operation, the public should first oblige such industry to prepare itself for the employment of women by providing the irreducible minimum of decency and comfort before it is permitted to employ them. Moreover, any policy of employing women to lower wages or to keep wages from rising to meet increases in the cost of living will have a most detrimental effect on the labor market and will result in a lowering of standards of wages and working conditions for both male and female labor.

EFFECT OF RAILWAY NATIONALIZATION ON WAGES, HOURS, AND TRANSPORTATION RATES.

BY FLORENCE E. PARKER.

By the action of the Government in assuming control of the railroads of the country, the United States joins Great Britain, France, Russia, and Italy, all of which took over the operation of their railroads as a war measure. Of these countries, all but Great Britain already owned and operated a part of the railroad lines before the War. Aside from State operation of railways as a purely war measure, the tendency toward Government ownership of this public utility has been marked. France has owned and operated the State Railway since 1878, and in 1908 purchased the Western Railway. The other lines were operated, until the outbreak of war, under private management. Before the War Russia was gradually acquiring the private lines of that country. Italy has owned the majority of her railroads since 1884 and has operated them since 1905. Switzerland and Japan have also definitely committed themselves to Government ownership of railways, the former in 1898 and the latter in 1906.

The following table shows the comparative extent of public and private ownership of railways in specified countries, in 1913, the latest year for which figures are available:

MILEAGE OF STATE AND PRIVATE RAILWAYS IN 1913, BY COUNTRIES.

[Source: Archiv für Eisenbahnwesen, 1913, pp. 520-522. Publication of Preussischen Ministerium der öffentlichen Arbeiten.]

Country.	Number of miles of railroad.			Per cent of mileage—	
	State owned.	Privately owned.	Total.	State owned.	Privately owned.
Europe.					
Germany	36,597	2,979	39,576	92.5	7.5
Austria-Hungary	23,429	5,260	28,689	81.7	18.3
Great Britain	.....	23,422	23,422	.....	100.0
France	5,606	26,182	31,788	17.6	82.4
European Russia	24,549	14,076	38,625	63.6	36.4
Italy	9,085	1,866	10,951	83.0	17.0
Belgium	2,704	2,770	5,474	49.4	50.6
Luxembourg	122	204	326	37.4	62.6
Netherlands	1,113	909	2,022	55.0	45.0
Switzerland	1,700	1,320	3,020	56.3	43.7
Spain	.....	9,532	9,532	.....	100.0
Portugal	713	1,139	1,852	38.5	61.5
Denmark	1,217	1,125	2,342	52.0	48.0
Norway	1,634	286	1,920	85.1	14.9
Sweden	2,863	6,136	8,999	31.8	68.2
Serbia	634	.....	634	100.0	.....
Roumania	2,204	133	2,337	94.3	5.7
Greece	.....	999	999	.....	100.0
Bulgaria	1,199	.....	1,199	100.0	.....
European Turkey	.....	1,238	1,238	.....	100.0
Islands of Malta, Jersey, and Man	.....	68	68	.....	100.0
Total	115,369	99,644	215,013	53.7	46.3

MILEAGE OF STATE AND PRIVATE RAILWAYS IN 1913, BY COUNTRIES—Concluded.

Country.	Number of miles of railroad.			Per cent of mileage—	
	State owned.	Privately owned.	Total.	State owned.	Privately owned.
The Americas.					
Canada	1,771	27,509	29,280	6.0	94.0
United States	.....	255,180	255,180	.....	100.0
Newfoundland	.....	769	769	.....	100.0
Mexico	12,344	3,487	15,831	78.0	22.0
Central America [1]	359	1,645	2,004	17.9	82.1
Greater Antilles	150	3,254	3,404	4.4	95.6
Lesser Antilles	.....	336	336	.....	100.0
Colombia	110	511	621	17.7	82.3
Venezuela	68	565	633	10.7	89.3
British Guiana	.....	104	104	.....	100.0
Dutch Guiana	.....	37	37	.....	100.0
Ecuador	.....	651	651	.....	100.0
Peru	1,052	666	1,718	61.2	38.8
Bolivia	.....	1,502	1,502	.....	100.0
Brazil	6,723	8,793	15,516	43.3	56.7
Paraguay	.....	232	232	.....	100.0
Uruguay	.....	1,638	1,638	.....	100.0
Chile	1,980	1,976	3,956	50.1	49.9
Argentina	3,488	17,139	20,627	16.9	83.1
Total	28,045	325,994	354,039	7.9	92.1
Asia.					
Asiatic Russia and Siberia	6,799	3,081	9,880	68.8	31.2
China	.....	6,119	6,119	.....	100.0
Japan (including Korea)	4,867	1,955	6,822	71.3	28.7
British India	29,299	5,329	34,628	84.6	15.4
Ceylon	.....	603	603	.....	100.0
Persia	.....	34	34	.....	100.0
Asia Minor	912	2,484	3,396	26.9	73.1
Portuguese Indies	.....	51	51	.....	100.0
Malay States	.....	857	857	.....	100.0
Dutch Indies	1,536	236	1,772	86.7	13.3
Siam	597	105	702	85.0	15.0
Other countries	.....	2,296	2,296	.....	100.0
Total	44,010	23,150	67,160	65.5	34.5
Africa.					
Egypt (including Sudan)	2,908	785	3,693	78.7	21.3
Algiers and Tunis	1,802	2,161	3,963	45.5	54.5
Belgian Congo Colonies	.....	863	863	.....	100.0
Union of South Africa:					
Cape Colony	3,429	545	3,974	86.3	13.7
Natal	1,102	.....	1,102	100.0	.....
Central South Africa	3,311	155	3,466	95.5	4.5
Rhodesia	.....	2,405	2,405	.....	100.0
Colonies:					
German	2,593	.....	2,593	100.0	.....
English	1,313	1,041	2,354	55.8	44.2
French	.....	1,998	1,998	.....	100.0
Italian	.....	96	96	.....	100.0
Portuguese	.....	1,009	1,009	.....	100.0
Total	16,458	11,058	27,516	59.8	40.2
Australia.					
New Zealand	2,859	29	2,888	99.0	1.0
Victoria	3,645	25	3,670	99.3	.7
New South Wales	3,928	167	4,095	95.9	4.1
South Australia	2,079	232	2,311	90.0	10.0
Queensland	4,521	294	4,815	93.9	6.1
Tasmania	507	194	701	72.3	27.7
Western Australia	2,852	576	3,428	83.2	16.8
Total	20,391	1,517	21,908	93.1	6.9
Grand total	224,273	461,363	685,636	32.7	67.3

[1] Including Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, and Panama.

Eleven of the European countries for which figures are given owned all or the greater part of their railways in 1913. All of the seven States of Australia owned the greater part of their railroad lines. In the Americas, on the other hand, the railroads of 16 of the 19 geographical divisions were predominantly private-owned.

The transfer of railroad operation from private to public management in the United States brings up the question of what effect this transfer will be likely to have upon the wages received by railroad employees and the length of their working day, as well as upon the freight and passenger rates charged. These points are of present interest not only to the employees concerned but also to the traveling and shipping public. It was thought that, in this connection, the experience of other countries might throw some light on what may be expected to happen here. Accordingly, a historical study of the effect of nationalization of railways in France, Italy, Switzerland, and Japan was undertaken. The results of this study, though not satisfactory in all respects on account of the scarcity of available data, are given here.

FRANCE.

The railroad policy of France dates from 1842, when a national railway system was planned. Under the plan the State undertook the construction of earthwork, masonry, and stations, and provided one-third of the necessary land. The Departments, corresponding to our States, were to pay the other two-thirds of the land cost. Private companies were to lay the rails, maintain the permanent way, and supply and operate the rolling stock. Nine lines were laid out by expert engineers in such a way as to avoid parallel lines.[1]

In 1883 the railroads were reorganized into six systems, in addition to the State system of 1,615 miles acquired in 1878.[2] Each of the six "great companies," as they are called, had a distinct territory in which it had a monopoly. The affairs of the companies were subject to close scrutiny by the State. By the "conventions" and "cahiers des charges" under which the companies operated they were allowed to charge up to certain maximum rates (which, as a matter of fact, were higher than the companies cared to charge), but no change could be made in the rates of any company without the approval of the Minister of Public Works.[3] The minister also regulated the maximum hours which railroad employees should be allowed to work. The Government guaranteed each company a minimum dividend equal to the dividend it had formerly paid; but, on the

[1] New Encyclopedia of Social Reform, p. 1022.

[2] British Board of Trade. Return to House of Commons on railways (foreign countries and British possessions), 1907, p. 46.

[3] Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 137.

other hand, two-thirds of the amount available for dividends, above a certain fixed profit, went to the State.[1]

From the foregoing it is evident that in France the interests of railroads and State are closely connected.

On July 13, 1908, the bill authorizing the purchase of the railway lines of the Western Co. was passed. This step was taken because the Western had become so in debt to the State, through subventions granted to it, that doubt was felt as to its ability ever to repay the money owed. Thus, 3,707 miles were added to the "old" State System, as it was henceforth called, which had by this time increased to 1,844 miles.[2]

Following is a statement showing the length of each of the "great" railways in 1908,[2] when the Western was taken by the Government, and the per cent that the mileage of each is of the total mileage of the "great" lines:

	Mileage.	Per cent.
State	1,844	7.7
Western	3,707	15.4
Northern	2,342	9.7
Eastern	3,101	12.9
Orleans	4,816	20.0
Paris-Lyon-Mediterranean	5,906	24.5
Midi	2,380	9.9
Total	24,096	100.0

Wages.—According to a report made to the British Board of Trade in 1910, the salaries fixed by the decree of December 16, 1899, amended by the decree of July 2, 1901, for engineers ("engine drivers" in the British report), guards, firemen, and brakemen on the State lines, were as follows:

ANNUAL SALARIES OF SPECIFIED OCCUPATIONS ON **FRENCH** STATE RAILWAYS FIXED BY DECREE, 1901.[3]

Class.	Salaries fixed for each class of—			
	First-grade engineers.	Engineers.	Guards [4] and firemen.	Brakemen.
	Francs.	*Francs.*	*Francs.*	*Francs.*
Class No. 1	4,200 ($810.60)	3,300 ($636.90)	2,250 ($434.25)	2,100 ($405.30)
Class No. 2	3,900 ($752.70)	3,000 ($579.00)	2,100 ($405.30)	1,950 ($376.35)
Class No. 3	3,600 ($694.80)	2,700 ($521.10)	1,950 ($376.35)	1,800 ($347.40)
Class No. 4	3,300 ($636.90)	2,400 ($463.20)	1,800 ($347.40)	1,650 ($318.45)
Class No. 5	3,000 ($579.00)	2,100 ($405.30)	1,650 ($318.45)	1,500 ($289.50)
Class No. 6	2,700 ($521.10)	1,800 ($347.40)	1,500 ($289.50)	1,350 ($260.55)
Class No. 7	.....	.....	1,350 ($260.55)	1,200 ($231.60)

[1] New Encyclopedia of Social Reform, p. 1023.
[2] France. Ministère du Travail et de la Prévoyance Sociale. Annuaire Statistique, 1910, p. 162.
[3] Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5105.] 1910, pp. 204, 205.
[4] Corresponding to "conductors" on United States railways, but with less extensive duties.

The following table shows, for the same occupations, the salaries fixed by the decree of January 22, 1910, in effect November 1, 1909:

ANNUAL SALARIES OF SPECIFIED OCCUPATIONS ON **FRENCH** STATE RAILWAYS, FIXED BY DECREE, 1909.[1]

Class.	Salaries fixed for each class of—			
	First-grade engineers.	Engineers.	Guards [2] and firemen.	Brakemen.
	Francs.	*Francs.*	*Francs.*	*Francs.*
Class No. 1	5,000 ($965.00)	3,600 ($694.80)	2,400 ($463.20)	2,100 ($405.30)
Class No. 2	4,500 ($868.50)	3,300 ($636.90)	2,200 ($424.60)	1,950 ($376.35)
Class No. 3	4,000 ($772.00)	3,000 ($579.00)	2,000 ($386.00)	1,800 ($347.40)
Class No. 4	3,600 ($694.80)	2,700 ($521.10)	1,800 ($347.40)	1,650 ($318.45)
Class No. 5	3,300 ($636.90)	2,400 ($463.20)	1,650 ($318.45)	1,500 ($289.50)
Class No. 6	3,000 ($579.00)	2,100 ($405.30)	1,500 ($289.50)	1,350 ($260.55)
Class No. 7	.....	1,800 ($347.40)	[3] 1,350 ($260.55)	[3] 1,200 ($231.60)

[1] France. Budget of 1912, vol. 4, pp. 1327–1331.
[2] Corresponding to "conductors" on United States railways, but with less extensive duties.
[3] Class was later abolished by decree of Dec. 23, 1911, and employees of the class were promoted to class No. 6. (Budget of 1913, vol. 4, pp. 808, 809.)

Comparison of the two tables above shows an increase in every class of first-grade engineers and of engineers. In the case of the latter a seventh class was created, with the salary of the former class 6. Salaries of guards and firemen were increased in the three higher classes but remained unchanged in the four lower classes. No change was made in the salaries of any of the classes of brakemen, though, as noted in the second table, employees of class 7 were promoted to class 6 when, in 1911, class 7 was abolished by order. The same order abolished all classes of employees with salaries of less than 1,200 francs ($231.60), and thus established 1,200 francs as the minimum salary on the French State railways.

According to the statement of the director of the State railroads, the effect of the new scale of 1909 was that it brought about "an immediate improvement in the situation of employees whose salary did not correspond to that of one of the classes of the new scale." All these employees obtained, beginning with November 1, 1909, the salary provided for the class immediately above that in which they had formerly been.[1]

Each year two tables of advancement are made out, one according to seniority and one according to selection on the basis of merit. Promotions are from one class to the next higher class and occur January 1 and July 1, according to the directions of the tables, and may be made on the basis of seniority or of merit, or a combination of the two. Advancements on the ground of seniority take place automatically at intervals varying with the classification group of the employee. Such promotions may be hastened, on the ground of merit, by the recommendation or "choice" of a promotion committee.[2]

[1] France. Budget of 1913, vol. 4, 2e annexe à l'Ordre Général No. 525, p. 827.
[2] Information relative to promotions obtained from Budget of 1912, vol. 4, p. 1336, and Budget of 1913, vol. 4, p. 828.

The following table shows the basis upon which advancements are made, as established in 1912:

BASIS ESTABLISHED IN 1912 FOR PROMOTIONS ON THE **FRENCH** STATE RAILWAYS.

Salary classification.	Interval between promotions according to—		Proportionate weight of merit and of seniority.
	Seniority. (Maximum.)	Merit. (Minimum.)	
Over 6,000 francs		4 years	Merit entirely.
Over 4,500 francs and including 6,000 francs		3 years	Do.
Over 2,400 francs and including 4,500 francs	4 years	2½ years	⅓ seniority, ⅔ merit.
1,650 francs and including 2,400 francs	do	do	⅔ seniority, ⅓ merit.
Under 1,650 francs	3 years	2 years	Do.
Group XIV	2 years	1½ years	Do.

The following statement shows the average salary in each of the four most important branches of the railway administration and of all employees in 1911 computed on the basis of employees actually in service December 31, 1911:[1]

Service of direction	$584.73
Service of operation	302.81
Service of traction and material	385.14
Service of way and construction	224.07
Total employees (all branches of the service)	312.32

All the above figures are for actual salary. In addition, the employees of all French railways are given allowances of various kinds—residence allowance, pension deposit, yearly bonus for good service, family allowance (per child under 16 years up to third child)—besides the privilege of reduced freight rates, passes on the company lines, and concessions in the matter of physician and medicine.[2] The railroads do not supply the uniforms.

Hours of labor.—As mentioned before, the length of the working day is regulated by decree of the Minister of Public Works. Up to the time the Western Railroad was taken over, the hours of "engineers, firemen, and employees in train service were fixed by decrees bearing date of November 4, 1899, amended May 20, 1902, and May 9, 1906. An order applying to station employees was issued on November 23, 1899, while the hours of labor of those engaged in the supervision and maintenance of way were regulated by an order of October 10, 1901."[3]

From 1883 to the dates named above the hours of labor of engineers, firemen, conductors, and brakemen had been fixed at not more than 12 hours daily, including the time of their obligatory presence at duty points before and after actual employ-

[1] France. Budget of 1913, vol. 4, p. 622.
[2] Léon Seilhac: La Grève des Cheminots, 1910, p. 26.
[3] Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, p. 124.

ment, while the hours of labor of switchmen had been fixed at 12 per day as early as 1864.[1]

The decree of May 9, 1906, stipulated that the hours of actual work of engineers and firemen should not exceed 90 in any consecutive 9 days, and that those of trainmen should not exceed 140 in any consecutive 14 days, thus establishing an average working day of not over 10 hours.[2]

According to a decree issued April 10, 1909, so far as possible 270 hours should be the maximum number of hours for engineers and firemen and 280 hours for trainmen, over a period of 30 consecutive days.[2] This decree reduced the maximum hours per day of engineers and firemen from 10 to 9 and of trainmen from 10 hours to 9 hours and 20 minutes.

The decree of April 10, 1909, was canceled and superseded by that of May 28, 1914. The principal changes effected by the later decree are that the minimum interval of rest separating two periods of work is reduced from 17 to 15 hours, and that a period of rest of 30 hours must be allowed every 10 days instead of every fortnight.

The following table, the figures of which are taken from bulletins of the French labor office, shows the average number of hours actually worked on each of the "great" railways of France during the years 1907, 1910, and 1912. The figures in this table are not very satisfactory, in that the average number of hours as given is not a definite number, but a range, of hours. They were, however, the only figures for actual hours that could be obtained.

AVERAGE DAILY HOURS WORKED ON **FRENCH** RAILROADS, 1907, 1910, AND 1912.

Occupation and railroad.	Average number of hours worked per day.		
	1907 [3]	1910 [4]	1912 [5]
	H. m. *H. m.*	*H. m.* *H. m.*	*H. m.* *H. m.*
Engineers and firemen:			
Old State Railroad	4 32 to 10 00	5 52 to 9 52	3 32 to 9 53
Western Railroad	5 08 to 9 54	3 35 to 9 49	
Northern Railroad	5 28 to 9 15	5 40 to 10 00	4 13 to 9 57
Eastern Railroad	6 27 to 10 00	5 02 to 9 56	5 05 to 9 00
Orleans Railroad	6 58 to 10 00	5 01 to 9 55	5 03 to 9 58
Paris-Lyon-Mediterranean Railroad	6 22 to 9 59	5 42 to 10 00	5 57 to 9 53
Midi Railroad	7 05 to 9 55	6 37 to 9 58	5 53 to 9 57
Train agents:			
Old State Railroad	4 28 to 10 19	2 21 to 10 05	1 54 to 10 55
Western Railroad	5 31 to 10 32	4 23 to 10 33	
Northern Railroad	4 35 to 9 52	6 11 to 9 34	6 25 to 9 51
Eastern Railroad	6 08 to 10 52	5 48 to 9 26	5 28 to 9 08
Orleans Railroad	6 01 to 10 52	6 22 to 9 41	6 27 to 10 17
Paris-Lyon-Mediterranean Railroad	7 18 to 10 53	6 56 to 10 13	7 25 to 10 16
Midi Railroad	6 32 to 10 23	6 39 to 10 13	6 54 to 9 58

[1] Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, p. 124.
[2] France. Bulletin de l'Office du Travail, May, 1909, p. 572.
[3] France. Bulletin de l'Office du Travail, July, 1910, pp. 731, 733.
[4] Idem. September, 1913, pp. 881, 883.
[5] Idem. June, 1914, p. 404.

This table shows that while the average hours actually worked by engineers and firemen in 1907 did not exceed the 10-hour maximum established by the decree of 1906, on only one railroad, the Northern, was this true of trainmen. In 1912 three lines were still offenders with respect to the hours of trainmen, the State lines (the old State System and the Western Railroad) being among them. Only one line, the Eastern, conformed to the decree of April 10, 1909, establishing 9 hours as the working day for engineers and firemen and 9 hours and 20 minutes as that for trainmen.

It will be noted that both upper and lower limits of length of average actual time worked by engineers on the State lines were reduced between 1907 and 1912. On the other hand, while the lower limit on the State lines in 1912 was lower than on the other lines, the upper limit of hours of engineers and firemen was not noticeably lower than that of the private companies, and in the case of trainmen was higher.

Freight and passenger rates.—The question of French freight and passenger rates is involved. Freight rates are very complicated, and the difficulties in determining them have led to the growth of a distinct business, that of the "expediteur," the professional rate computer. In France freight is sent by "grande vitesse" and by "petite vitesse." The former, or fast freight, corresponds somewhat to our "express" service, and the latter, or slow freight, to our regular freight service.

In this study no attempt was made to secure rates for the fast freight, for the reason that it corresponds more nearly to our "express" service and not to "freight" as we understand it. In securing the rates for slow freight, only the receipts per ton-mile could be obtained from the figures available. It was thought, however, that the receipts per ton-mile would answer the present purpose, since these receipts may be taken as the average of freight rates, as "rates" are understood in this country, and since the object of this article is to show the upward or downward trend of the rates rather than the amount of the rates themselves.

Somewhat the same difficulty was encountered in ascertaining the passenger rates. French railroads carry first, second, and third class coaches, but while the official reports give the number of people who traveled in each class, they do not give the miles traveled in each class, nor the receipts from each class of travelers. Therefore, only the receipts per mile from all classes of passenger travel are given.

By the "cahier des charges," passengers are allowed free transportation of 30 kilograms (66 pounds) of baggage.[1]

[1] Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 125.

The following table shows the average receipts per ton-mile and per passenger-mile for the years 1907, 1910, and 1912. For purposes of comparison, the corresponding receipts of the five private railroad companies are given.

AVERAGE RECEIPTS PER TON-MILE AND PER PASSENGER-MILE OF **FRENCH** RAILROADS, 1907, 1910, AND 1912, AND PER CENT OF INCREASE OR DECREASE IN 1910 AND 1912 AS COMPARED WITH 1907.

Railroad.	Average receipts per mile.[1]					
	1907		1910		1912	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Old State Railroad	0.950	1.460	0.933	1.446	0.929	1.447
Western Railroad	1.109	1.460	1.046	1.471	1.044	1.470
Private railroads:						
Northern	1.128	1.026	1.095	1.029	1.073	1.014
Eastern	1.028	1.126	1.002	1.069	.983	1.037
Orleans	1.101	1.348	1.068	1.278	1.059	1.268
Paris-Lyon-Mediterranean	1.242	1.221	1.204	1.213	1.201	1.195
Midi	1.100	1.353	1.078	1.276	1.079	1.294
All private railroads	1.140	1.190	1.107	1.158	1.097	1.139

Railroad.	Per cent of increase (+) or decrease (−) as compared with 1907 in—			
	1910		1912	
	Passenger.	Freight.	Passenger.	Freight.
Old State Railroad	−1.8	−1.0	−2.2	−0.9
Western Railroad	−5.7	+ .8	−5.9	+ .7
Private railroads:				
Northern	−2.9	+ .3	−4.9	−1.2
Eastern	−2.5	−5.1	−4.4	−7.9
Orleans	−3.0	−5.2	−3.8	−5.9
Paris-Lyon-Mediterranean	−3.1	− .7	−3.3	−2.1
Midi	−2.0	−5.7	−1.9	−4.4
All private railroads	−2.9	−2.7	−3.8	−4.3

[1] Figures computed from data given in Annuaire Statistique of the French Ministère du Travail et de la Prévoyance Sociale for the years 1909, 1912, and 1914.

As the above table shows, passenger receipts on the Western Railroad declined 5.7 per cent between 1907 and 1910. Freight receipts, however, increased 0.8 per cent in the same time. It is a question whether the decrease in passenger receipts was due to State operation of the road, inasmuch as during the same period, 1907 to 1910, the private companies reduced not only their receipts per passenger-mile 2.9 per cent, but also their freight receipts 2.7 per cent. Instead of Western passenger rates (already lower than the average passenger rate of the companies) being reduced and the freight rate (much higher than that of the companies) being increased, one would expect to find the reverse. The explanation may be that, as noted before, each com-

pany, having a monopoly in its district, does not have to compete with the others in the matter of rates.

It will be noticed that instead of the passenger rate being higher than the freight rate, as in the United States, the opposite is true. This was found to be the case in all of the countries studied.

ITALY.[1]

Italy has tried various policies with regard to her railways. Originally the lines were owned and operated by private companies, but were gradually acquired by the State under whose management they continued until 1884. In that year, though ownership still remained in the Government, operation was leased for 60 years to three companies, called the Mediterranean, the Adriatic, and the Sicilian, respectively. The lease provided that the 60 years should be divided into three periods of 20 years each, and that at the end of any 20-year period the State or the companies might abrogate the contract, the railways to revert to the State in that case.[2]

At the end of the first period the State exercised its right and took over the operation of the railroads by the law of April 22, 1905.[3] Actual management was undertaken July 1, 1905.[3]

Wages.—In 1903, while the railways were being operated by the three companies, the average annual salary (including supplementary allowances) of all railway employees was $257.46.[4] In 1908, three years after the resumption of Government operation, the average wage had risen to $301.38,[5] and by 1910 to $315.38. A British official report gives the wages, for 1910, of engineers, firemen, and brakemen, as follows:

ANNUAL SALARIES OF ENGINEERS, FIREMEN, AND BRAKEMEN ON ITALIAN STATE RAILWAYS, 1910.[a]

Occupation.	Annual salaries.		Years to attain maximum.	Amount of supplementary allowances per year.
	Minimum.	Maximum.		
Engineers	$289.50	$521.10	18	$171.60
Firemen	173.70	318.45	23	156.60
Brakemen	b.41	b.62	23	118.20

[a] Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 271.
[b] Per day.

The following table shows the average annual salaries of employees of the different branches of the railway service, 1910 and 1913. No

[1] Grateful acknowledgment is made of assistance rendered by Mr. André Bernard, of the Legislative Reference Division, Library of Congress, in obtaining information on Italy.

[2] Bul. 31, U. S. Bureau of Labor Statistics, November, 1900, p. 1211.

[3] Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 228.

[4] Italy. Ministero di Agricoltura, Industria e Commercio. Direzione Generale della Statistica. Annuario Statistico Italiano, 1905-1907, p. 655.

[5] Idem, 1911, p. 187.

detailed figures relative to salaries could be obtained for the years prior to 1910.

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON **ITALIAN** STATE RAILWAYS, BY BRANCH OF SERVICE, 1910 AND 1913.

Branch of service.	1910.[1]			1913.[2]		
	Average annual salary.	Average amount of allowances.	Total annual salary (including contributions to pension, etc.)	Average annual salary.	Average amount of allowances.	Total annual salary (including contributions to pension, etc.)
General administration	$354.11	$90.73	$476.97	$407.06	$122.99	$572.87
Movement	234.36	76.59	340.20	272.56	95.71	400.40
Traction	230.94	138.66	401.17	281.97	183.71	506.34
Rolling stock				258.25	117.12	402.83
Maintenance and construction	157.66	26.27	197.08	186.69	41.24	243.07
All employees	214.26	76.37	315.38	252.09	96.43	376.81

[1] Ferrovie dello Stato. Statistica dell'Esercizio, Anno 1910, Part I, pp. 374–377.
[2] Idem, 1913, Part I, Vol. II, pp. 280–283.

In 1914, the latest year for which figures are available, the average wage for all employees was $378.26.[1]

Employees are not provided with their uniforms free of charge, but the railway administration contributes to the cost.[2]

Promotions and increases in salary are determined by the Council of Administration.[3]

Hours of labor.—Up to 1900 no effort was made by the Italian Government to fix definite hours for employees of railways. The law of March 20, 1865, provided merely that "the companies must fix a time schedule of service for the employees so as to allow them the necessary hours of continuous rest." [4] This was so vague as to have no real force.

The decree of November 7, 1902, specified definite hours:

> The average duration of a day's labor of locomotive engineers and firemen, inclusive of the reserve days, days subject to orders, and days of rest, must not exceed 10 hours. The hours of labor include the time of actual service, counting from the moment when the employee is required to be present on duty until the time when he is permitted to leave, together with intervals between the arrival and departure of trains, when such intervals are not more than one and one-half hours in length. Time required to go by train to the place of duty and to return, and the time during which employees must be on their locomotives subject to orders to go to the relief of any train, are also computed as work time. * * *
>
> Actual working time, or the time considered as such, should fall within a period of not more than 17 hours' length, which must be both preceded and followed by periods

[1] Italy. Ministero di Agricoltura, Industria e Commercio. Direzione Generale della Statistica. Annuario Statistico Italiano, 1915, p. 222.
[2] Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 280.
[3] Idem, p. 229.
[4] Bul. 31, U. S. Bureau of Labor Statistics, November, 1900, p. 1216.

of unbroken rest. The maximum work time within such a period is fixed at 13 hours, unless the labor is broken by brief periods of rest, when the hours of labor may be increased to 14. * * *

For train employees, including conductors, guards, and brakemen, the hours of labor include the schedule time of the train, the time spent in preparation for work, and in turning it over, and intervals of not more than 1½ hours' length between the arrival and departure of trains. To this is added one-fourth of the time which any employee must spend at the stations on reserve and subject to call. The average duration of daily labor thus computed, including reserve service and short periods of rest during working time, is limited to 11 hours. The working time must fall within a period of not more than 17 hours' length, unless the day is broken by one or more periods of inactivity of not less than 4 hours' length, when the day may be prolonged to 19 hours. Actual labor, however, must not exceed 15 hours in any work period. * * *

The hours of labor of station employees, including track workmen, are fixed with regard to the nature of their employment. The limit named in the decree is 10 hours where the labor is difficult or taxing, and 12 hours under ordinary conditions. Where service alternates between night and day shifts, labor of the more difficult kind may be extended to 12 hours, if in addition to the hour allowed for meals there is given each week a continuous rest of 24 hours at the time of the change from night to day service, or the reverse. The time of actual labor must fall within a period of 16 or 17 hours, according as the period of unbroken rest allowed is 8 or 7 hours. The latter limit is allowed only when the employee resides in the station or at a point not more than 500 meters (1,640 feet) distant from his post of duty.

The regular term of daily service for gatekeepers is fixed at 14 hours for males and 12 hours for females. Trackmen who also serve as gatekeepers may be employed for not more than 13 hours daily, with a rest of not less than 8 hours, besides the time required for going to and from home.[1]

As far as can be determined the Italian railways are still working under this law.

Freight and passenger rates.—In Italy, as in France, the freight service generally has been divided into fast and slow freight.

In 1903, while the operation of the railroads was still being carried on by private companies, the average receipts per passenger-mile were 1.303 cents and per ton-mile 1.175 cents.[2]

Since 1903 no figures for passenger-miles or ton-miles have been published by the Italian railway administration and therefore figures corresponding to those given above for 1903 could not be obtained. In 1910, however, a report[3] dealing with Italian railways was made to the British Board of Trade giving actual rates for the various classes of freight and passenger service. The following facts are taken from that report.

Passenger rates on the Italian State railways are divided into two classes: (1) For journeys up to 150 kilometers (93.2 miles) and (2)

[1] Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, pp. 128–131.

[2] Italy. Direzione Generale della Statistica. Annuario Statistico Italiano, 1905–1907, pp. 660, 665.

[3] Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910.

"differential" rates for longer distances. For the first 150 kilometers the rate is as follows:

Kind of train.	Fare per passenger per mile.		
	First class.	Second class.	Third class.
	Cents.	*Cents.*	*Cents.*
Fast	3.964	2.774	1.818
Slow and mixed	3.603	2.522	1.623

For trains composed entirely of first-class cars the fare is 0.1392 lira per passenger per kilometer (4.32 cents per mile).

Beyond 150 kilometers the fares rise gradually.

No free baggage, except hand baggage, is allowed.

Goods may be shipped by either fast or slow freight. Fast-freight rates vary according to the kind of goods sent. Slow freight is divided into eight classes, the rates for which are as follows:

	Class 1.	Class 2.	Class 3.	Class 4.	Class 5.	Class 6.	Class 7.	Class 8.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Per ton per mile	4.64	4.00	3.48	2.90	2.32	2.03	1.74	1.45
Fixed terminal charge per ton	5.80	5.80	5.80	5.80	5.80	3.48	3.48	3.48

The following changes in rates were effected by the act of April 13, 1911, effective June, 1911:

1. Nine per cent increase in the price of all tickets 40 per cent or more under the regular rate.
2. Graded increase in regular rate, according to length of journey.
3. Nine per cent increase on all season tickets.
4. Six per cent increase on all round-trip tickets.
5. Increase of 0.0515 lira (0.99 cent) for goods of the first five classes of slow freight, and of 0.0258 (0.5 cent) on the last three classes.

In 1913 a commission was appointed to inquire into the question of rates. Its report was made in 1917, but the recommendations have not yet gone into effect.

SWITZERLAND.

Up to 1898 the railways of Switzerland were privately owned and managed. On February 29, 1898, a referendum was taken and the purchase of the chief railways authorized. The dates of purchase were as follows: Central Suisse, Nord-Est, and Union Suisse, January 1, 1901; Jura-Simplon, January 1, 1903; and St. Gothard, May 1, 1909.[1]

[1] British Board of Trade. Return to House of Commons on railways (foreign countries and British possessions), 1907, p. 72.

Wages.—Immediately upon the passage of the railway-purchase bill, an investigation of the wages of employees of all the principal railway companies in Switzerland was undertaken. The following table taken from the consequent report shows salaries of specified employees in 1898, at entrance, and after each classified length of service:

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON **SWISS** RAILWAYS IN 1898, AT ENTRANCE AND AFTER EACH SPECIFIED LENGTH OF SERVICE.

[Source: Les traitements du personnel des chemins de fer suisses, by Sourbeck.]

Occupation.	Average annual salary in 1898.							
	At entrance.	After 1 to 2 years of service.	After 3 to 5 years of service.	After 6 to 10 years of service.	After 11 to 15 years of service.	After 16 to 20 years of service.	After 21 to 25 years of service.	After 25 years of service.
Engineers	$303.40	$352.80	$364.77	$388.70	$434.64	$473.62	$534.61	$555.45
Conductors	.....	.....	314.98	332.35	349.52	379.05	391.23	509.52
Firemen	261.71	267.11	297.22	308.22	342.19	347.79	360.33	370.56
Brakemen	218.86	220.02	234.30	255.53	270.59	280.43	274.64	277.92
All employees	254.37	260.74	289.11	321.35	362.26	389.67	273.90	468.99

Shortly after the purchase of the railroads was authorized, the Swiss parliament took up the question of salaries of railroad employees and passed a law, in effect June 29, 1900, dividing the employees into nine classes for which the following minimums and maximums were established:

MINIMUM AND MAXIMUM ANNUAL SALARIES FOR EMPLOYEES ON **SWISS** RAILROADS ESTABLISHED BY LAW OF JUNE 29, 1900.[1]

Class.	Salaries established in each class.	
	Minimum.	Maximum.
	Francs.	*Francs.*
Class No. 1	10,000 ($1,930.00)	15,000 ($2,895.00)
Class No. 2	6,000 ($1,158.00)	10,000 ($1,930.00)
Class No. 3	5,000 ($965.00)	8,000 ($1,544.00)
Class No. 4	4,000 ($772.00)	7,000 ($1,351.00)
Class No. 5	3,000 ($579.00)	5,000 ($965.00)
Class No. 6	2,400 ($463.20)	4,800 ($926.40)
Class No. 7	1,800 ($347.40)	3,600 ($694.80)
Class No. 8	1,500 ($289.50)	2,700 ($521.10)
Class No. 9	1,200 ($231.60)	2,500 ($482.50)

[1] H. Haguet: Le rachat des chemins de fer suisses. 1903, pp. 81, 82.

The law of June 29, 1900, also stipulated that every three years increases should be given of 500 francs ($96.50) for the first and second classes, and of 300 francs ($57.90) for the remaining classes.[1]

A law of 1906 provided that each married employee, or unmarried employee with dependents, earning less than 4,000 francs ($772) a

[1] H. Haguet: Le rachat des chemins de fer suisses. 1903, p. 82.

year should receive a bonus of 100 francs ($19.30); and all other employees earning less than 4,000 francs a bonus of 50 francs ($9.65).[1]

The table below shows the average annual salaries received by employees in the different branches of the Swiss railway service (all railways) in 1898, and in the corresponding branches of service on the State railways, 1907, 1910, and 1915:

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON SWISS RAILWAYS, BY BRANCH OF SERVICE, IN SPECIFIED YEARS.

Branch of service.	Average annual salary received in each specified branch of service.			
	All railways, 1898.[a]	State railways.		
		1907 [b]	1910 [c]	1915 [d]
General administration	$476.17	$501.81	$550.86	$618.33
Maintenance and inspection of way	126.79	131.38	146.33	146.72
Operation and movement of trains	334.47	379.01	420.84	478.18
Traction and material	235.82	259.13	289.50	317.20
All employees	254.63	291.20	328.25	366.10

[a] Switzerland. Post- und Eisenbahn departement. Schweizerische Eisenbahn-Statistik, 1898, pp. 114–135.
[b] Idem. 1907, pp. 162–199.
[c] Idem. 1910, pp. 160–197.
[d] Idem. 1915, pp. 148–181.

This table shows that there was a steady increase in the salaries in all departments during the time in which acquisition of the railways was taking place, and continuing to 1915, the latest year for which reports were available.

Hours of labor.—The hours of labor on Swiss railways were regulated, until 1902, by the law of June 27, 1890. This law provided that the maximum day for all employees should not exceed 12 hours.[2]

This law was superseded by a new enactment of December 19, 1902, after the nationalization of the railroads took place.

This law fixes 11 hours as the limit of the actual working time of officials, employees, and laborers of all kinds, which period may be reduced by the Federal Council in appropriate cases. The work period is to be divided into two parts, as nearly equal as possible, by a rest period of at least one hour. The time of rest is to be allowed at home where possible.

The period of work must fall within 14 consecutive hours for persons employed on locomotives and trains, and within 12 consecutive hours for female gatekeepers. The duty period is fixed at 16 hours' length for other classes of employees if they lodge in company buildings near their places of work, and at 15 hours in other cases. The hours of duty of all males may be extended to 16 when required by special conditions, provided that the periods of duty do not exceed an average of 14 and 15 hours, respectively, in any 3 days.[3]

[1] A. N. Holcomb: First decade of the Swiss Federal railways. In Quarterly Journal of Economics. vol. 26: 341–362. February, 1912.
[2] Bul. 20, U. S. Bureau of Labor Statistics, January, 1899, p. 110.
[3] Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, pp. 132, 133.

It will be seen that the chief feature of the new law was the reduction of hours from 12 to 11 per day.

Passenger and freight rates.—There are several classes of passenger travel in Switzerland, but as was the case in France, no division into classes is shown in the official reports. The figures given below are therefore receipts per ton-mile and per passenger-mile:

AVERAGE RECEIPTS PER TON-MILE AND PER PASSENGER-MILE OF SWISS RAILROADS, 1898, 1910, AND 1913, AND PER CENT OF INCREASE OR DECREASE IN 1910 AND 1913 AS COMPARED WITH 1898.

Railroad.	Average receipts per mile.					
	1898 [1]		1910 [1]		1913 [2]	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Private railroads	1.502	2.617	1.615	6.214	2.073	4.280
State railroads	.....	.....	1.164	2.465	1.144	2.447

Railroad.	Per cent of increase (+) or decrease (−) as compared with 1898 in—			
	1910		1913	
	Passenger.	Freight.	Passenger.	Freight.
Private railroads	+ 7.5	+145.1	+38.0	+64.4
State railroads	[3] −22.5	[3] − 5.0	[3] −23.8	[3] − 6.5

[1] Data from Annuaire statistique de la Suisse, 1912, pp. 115, 116. Bureau de statistique du Département Fédéral de l'Intérieur.
[2] Idem, 1915, pp. 106, 107.
[3] Percentage computed on basis of 1898, when all railways were private.

Assuming that income per ton-mile and per passenger-mile may be taken as equivalent to averages of freight rates and passenger rates, respectively, then in Switzerland, ownership by the Confederation has accomplished a good deal in the matter of reduction of rates. From 1898 to 1910 (the year after the last of the important lines, the St. Gothard, was purchased) passenger receipts declined 22.5 per cent and by 1913 had declined 23.8 per cent. During the same time passenger rates on the private lines had risen 7.5 and 38 per cent. On the State lines freight receipts per ton-mile also declined 5 and 6.5 per cent; on the private lines these rates increased 145.1 per cent between 1898 and 1910, and in 1913 were still 64.4 per cent higher than in 1898.

It is evident that there is a great disproportion between the rates of the private and those of the State lines.

JAPAN.

Japan is unique in its railway development in that the State entered the railway field before private capital. The first line, running between Tokio and Yokohama, was laid in 1870.[1] Once a beginning was made, however, private enterprise outstripped the State, and in 1906 the State owned only 1,531 miles of railroad as compared with 3,251 miles owned by private companies.[2] The bill for Federal purchase of the 17 principal privately owned lines passed March, 1906, and provided that the acquisition was to take place between 1906 and 1915. As a matter of fact the transference to public management was practically complete by March, 1908. During the financial year 1906–7[3] six private railways were purchased, and by the end of March, 1908, the Government owned and operated the lines of the 17 companies,[4] 90.9 per cent of all the railways of the country.[5]

Wages.—The wages of certain employees on Government railways, as reported to the State Department in 1910, by an American consul, were as follows:

ANNUAL SALARIES OF EMPLOYEES ON JAPANESE STATE RAILWAYS.

[U. S. Department of State Doc. No. 477, Wages and prices abroad, 1910, pp. 76 and 85.]

Grade.	Salaries of engineers.		Salaries of assistant engineers and clerks (including station masters).
	Throne appointees.	Cabinet appointees.	
Special	$2,241.00	$1,494.00	$597.60
First	1,992.00	1,245.00	448.20
Second	1,743.00	1,095.60	358.56
Third	1,494.00	996.00	298.80
Fourth	.....	896.40	268.92
Fifth	.....	796.80	239.04
Sixth	.....	697.20	209.16
Seventh	.....	597.60	179.28
Eighth	.....	498.00	149.40
Ninth	.....	448.20	119.52
Tenth	.....	398.40	89.64

The consul, reporting the above in 1910, stated that a bill was passed on March 10, 1910, providing for a general increase of 25 per cent in the wages of railroad employees, to take effect on and after April 1, 1910.

The following table shows the average amount received per month by certain employees in 1907–8 and 1910–11:

[1] Japan. Bureau of Commerce and Industry. General view of commerce and industry of the Empire of Japan. 1913, p. 41.

[2] The "Japan Gazette" Japan Year Book, 1914, p. 91.

[3] The Japanese fiscal year ends Mar. 31.

[4] Japan. Bureau of Commerce and Industry. General view of commerce and industry of the Empire of Japan. 1916, p. 3.

[5] The Seventeenth Financial and Economic Journal of Japan, 1917, p. 148.

AVERAGE MONTHLY SALARIES OF CERTAIN EMPLOYEES ON JAPANESE STATE RAILWAYS, 1907-8 AND 1910-11.

Occupation.	Average monthly salary per employee in—	
	1907-8 [1]	1910-11 [2]
Engineers, chokunin [3] rank	$133.46	$161.47
Engineers, sonin [4] rank	53.65	67.98
Assistant engineers, hannin [5] rank	21.06	26.32
Assistant engineers	10.73	11.60
Brakemen	5.90	6.24
Assistant firemen	5.75	.....
Guards	.....	7.53

[1] Report of Imperial Government Railways of Japan for year ended Mar. 31, 1908, appendix Table XL.
[2] Idem, 1911, p. 129.
[3] Denotes appointment by the Emperor.
[4] Denotes appointment made with the approval of the Emperor.
[5] Denotes appointment at the discretion of the chief official.

The figures in the above table are not, of course, comparable with the figures reported by the consul for 1910.

In the table following are shown the average monthly salaries of the various grades of employees on the Japanese State railways in 1905-6 (the year the railway-purchase bill was passed), in 1907-8 (the year in which the purchase of the roads was practically completed), as well as those for the years 1910-11, 1911-12, and 1915-16.

AVERAGE MONTHLY SALARIES OF EMPLOYEES OF EACH GRADE ON JAPANESE GOVERNMENT RAILWAYS IN SPECIFIED YEARS.[1]

Grade.	Average monthly salaries of employees of each grade in—				
	1905-6	1907-8	1910-11	1911-12	1915-16
Officials, chokunin rank	$145.25	$135.38	$164.39	$165.78	$166.83
Officials, sonin rank	64.72	52.12	66.76	68.10	75.99
Clerks, hannin rank	16.73	15.90	21.22	21.58	21.86
Assistant engineers, hannin rank	21.66	21.05	26.32	26.07	26.09
Employees, koin class	7.57	9.24	9.77	9.68	10.08
Employees, yonin class	6.67	6.89	7.31	6.94	7.92
Total	7.75	8.29	9.25	9.34	9.74

[1] Report of Imperial Government Railways of Japan for year ending Mar. 31, 1916, p. 89.

The foregoing table shows that upon the inauguration of State ownership of the Japanese railways, in 1907-8, the average monthly salary of employees of the four higher grades fell, though that of all employees increased. This was due to the fact that the salary of employees of the koin and yonin classes, who comprised about 92 per cent of the total number of employees, increased. During the period 1907 to 1910 the average salary of all classes of employees increased, the increases ranging from 5.7 per cent for employees of the koin class to 33.5 per cent for clerks of hannin rank. Considering all classes together the average increase was 11.6 per cent. It is

evident that the 25 per cent increase spoken of by the consul was not evenly distributed among all grades of employees.

Hours of labor.—Japan has never officially regulated the length of the railway employees' working-day.[1]

Freight and passenger rates.—Following are the average receipts per passenger-mile (all classes), and per ton-mile:

AVERAGE RECEIPTS PER PASSENGER-MILE AND PER TON-MILE, OF JAPANESE RAILROADS, 1905–6, 1907–8, AND 1911–12, AND PER CENT OF INCREASE OR DECREASE IN 1907–8 AND 1911–12 AS COMPARED WITH 1905–6.[a]

Railroad.	Average receipts per mile.					
	1905–6		1907–8		1911–12	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
	Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
State lines	0.709	0.999	0.741	0.866	0.689	0.826
Private companies	.659	.898	.773	1.065	.775	1.230

Railroad.	Per cent of increase (+) or decrease (−) as compared with 1905–6 in—			
	1907–8		1911–12	
	Passenger.	Freight.	Passenger.	Freight.
State lines	+ 4.5	−13.3	− 2.8	−20.9
Private companies	+17.3	+18.6	+17.6	+37.0

[a] Data from Sixteenth and Seventeenth Financial and Economic Annuals of Japan, 1916 and 1917.

As the table shows, in 1907–8 there was an increase over 1905–6 of 4.5 per cent in the average receipts per passenger-mile on the State lines. By 1911–12, however, these receipts were 2.8 per cent less than in 1905–6. Between 1905–6 and 1907–8 freight rates on the State lines fell 13.3 per cent, and between 1905-6 and 1911–12, 20.9 per cent. It is interesting to note that while the rates of the State railroads were decreasing, those of the private companies were increasing.

GREAT BRITAIN.[2]

Less than 24 hours after formal declaration of war between Great Britain and Germany, August 4, 1914, the Government had taken over the control of the entire railway system and had placed it in the hands of the Central Railway Executive Committee.

In reading the following account of changes in wages and rates which followed upon the Government assumption of control, it

[1] Information from Japanese Embassy.

[2] Great Britain has been included in this study because Government control of the railways was undertaken there, as in the United States, as a war measure, and likewise, as here, ownership remains in the original companies, the Government simply directing the operation.

should be borne in mind that these changes are principally due to the War and can not be pointed to as results of Government operation.

Wages.[1]—Up to the outbreak of the War no general increase in the wages of railway employees had taken place since 1911, though the unions had been striving for one.

The following table shows the average weekly earnings per employee (exclusive of clerical staff, salaried officers, and casual employees) on 27 of the principal railways, in the first week in December of the years 1911 to 1913:

AVERAGE WEEKLY EARNINGS OF RAILWAY EMPLOYEES IN **GREAT BRITAIN** 1911 TO 1913.[a]

Year.	Average weekly earnings per employee.	
	England and Wales.	Scotland.
	s. *d.*	*s.* *d.*
1911	27 4¼ ($6.66)	23 5½ ($5.71)
1912	28 0 (6.81)	24 4 (5.92)
1913	28 6½ (6.95)	25 1½ (6.12)

[a] Great Britain, Board of Trade. Report on rates of wages and hours of labor in the United Kingdom in 1913. [Cd. 7635.] p. 30.

Since the outbreak of the War various "war bonuses" have been granted because of the advance in cost of living due to the War. With the exception of the first bonus, one-fourth of the cost of which was borne by the railways, these bonuses have been guaranteed by the Government. The following table shows the amount of each separate bonus granted, together with the time the increases went into effect and the employees affected.

[1] Except as otherwise noted, information in regard to wages and rates in Great Britain was secured from War administration of the railways in the United States and Great Britain, by Frank Haig Dixon and Julius H. Parmelee. Carnegie Endowment for International Peace.

TIME OF GRANTING BONUSES, AMOUNT OF BONUS, AND EMPLOYEES AFFECTED, GREAT BRITAIN.

Year and month.	Amount of bonus (per week).	Employees affected.
	s. *d.*	
(1)	[2] 2 6 ($0.61)	Men.
June, 1915	1 6 (.37)	Boys.
October, 1915	2 6 (.61)	Men.
	1 0 (.24)	Boys.
September, 1916	5 0 (1.22)	Men.
	2 6 (.61)	Boys.
	3 0 (.73)	Women.
	1 6 (.37)	Girls.
April, 1917	5 0 (1.22)	Men.
	2 6 (.61)	Boys.
	2 6 (.61)	Women.
	1 3 (.30)	Girls.
November, 1917	6 0 (1.46)	Men.
	3 0 (.73)	Boys.
	3 0 (.73)	Women.
	1 6 (.37)	Girls.
Total:		
Men	21 0 (5.11)	
Boys	10 6 (2.56)	
Women	8 6 (2.07)	
Girls	4 3 (1.03)	

[1] Date not reported.
[2] Average: bonus was 3s. for men receiving 30s. or more per week, 2s. for men receiving less than 30s. per week.

The shopworkers were given bonuses similar to those noted in the table. The first bonus was given to them in February, 1915. This bonus, which amounted to 3s. (73 cents) a week, was later increased to 4s. (97 cents) for timeworkers and 10 per cent for pieceworkers. In September, 1916, the shopworkers were given an additional bonus of 5s. ($1.22) per week, in February, 1917, 5s. more, and in August, 1917, still another increase of 3s. to men, and 1s. 6d. (37 cents) to boys. The same increases were added to the weekly earnings of pieceworkers.

On July 1, 1916, salaried employees receiving an annual salary of from £200 to £213 ($973.30 to $1,036.56) were given a bonus sufficient to bring the annual income up to £213. These bonuses were doubled in September, 1916.

Until April, 1917, the bonuses did not apply in the computation of overtime and Sunday work which was paid for at the old rate.

Passenger and freight rates.—In 1911 as the result of a threatened general strike of railway workers, wages were advanced. To compensate the railways for this increase in expenses a law was passed early in 1913 permitting the roads to raise their rates approximately 4 per cent. The advances did not, however, go into effect until a few months before the War. Freight rates have increased very little since the railways have been controlled by the Government. Passenger rates have been increased several times and on January 1, 1917, were advanced 50 per cent. The normal passenger scale was as fol-

lows: First-class, 1½d. (3.04 cents) to 2d. (4.06 cents) per mile; second class 1¼d. (2.54 cents) per mile; third class 1d. (2.03 cents) per mile.

SUMMARY.[1]

Wages.—The data secured in this study show that in each of the four countries studied [1] an increase of wages has taken place either coincident with or shortly after State purchase. In France an increase was given in the wages of employees of the Western Railroad when that line was taken over, but since no data could be secured showing their average wage before 1908, it is impossible to calculate just what the per cent of increase was. In Italy, the increase, from 1903 to 1908, amounted to 17 per cent; in Switzerland, from 1898 to 1910, to 28.9 per cent; and in Japan, from 1905–6 to 1907–8, to 7 per cent. It can not be asserted that these increases of wages occurred solely in consequence of the ownership of the railways by the State, since many factors may enter into the question of wages. In France, for instance, a general strike occurred on the railways in 1910. This may or may not have had an effect in bringing about the increase.

Hours of labor.—It is difficult to say just what effect Government ownership has had on the length of the working-day of railway employees. France was the only country for which information as to actual hours worked could be secured. It is known, however, that France reduced the maximum working-day from 10 to about 9 hours, and Switzerland from 12 to 11 hours. No evidence was found of reduction of hours in Italy since the first definite pronouncement on the subject in 1902, three years before resumption of Government operation. Japan, as has been said, has no official limitation of working hours on railways.

Passenger and freight rates.—In France, in the period 1907 to 1910, average receipts per passenger-mile decreased 5.7 per cent, and per ton-mile increased 0.8 per cent. Government ownership in Switzerland resulted in a decrease, during 1898 to 1910, of receipts for both passengers and freight, the decreases being 22.5 and 5 per cent, respectively. In Japan, during 1905–6 to 1907–8, receipts per passenger-mile increased 4.5 per cent and those per ton-mile decreased 13.3 per cent.

[1] Great Britain is not included in the summary discussion for the reason that, as explained before, changes in wages, hours, and rates in that country, consequent to Government control, are strictly war changes.

FOOD SITUATION IN GERMANY NOVEMBER 1, 1917, TO JANUARY 31, 1918.

COMPILED AND TRANSLATED BY ALFRED MAYLANDER.

A detailed survey of the food situation in central European belligerant countries, compiled from articles in the daily press of those countries, has recently been published by the Bureau of Labor Statistics as Bulletin No. 242. This survey covered the period January 1 to October 31, 1917. In the following pages this survey is continued with respect to Germany, in more summarized form, for the period November 1, 1917, to January 31, 1918.

THE MEMORIAL OF THE NEUKÖLLN CITY COUNCIL.

The outstanding feature of the food situation in Germany during the three months under review in this article was the sensational case of the Neukölln memorial which demonstrates the utter breakdown of the economic system of the imperial food authorities. On December 3, 1917, the municipal administration of that Berlin suburb, reduced to desperation by the impending breakdown of its organization for the food supply, addressed to the War Food Bureau a lengthy memorial reviewing the whole situation; and on December 13 a report on the matter was presented to the city council. The municipal administration had intended to publish the memorial and to send copies of it to other municipalities; but von Waldow, the State secretary of the War Food Bureau, alarmed at the very frank exposure of the state of affairs, intervened with a prohibition to publish. The Berlin Socialist daily Vorwärts, however, by some means procured a copy of the memorial, and published it in full, with a defiant editorial note to the effect that in such cases to keep silent is to be an accessory after the fact. The memorial is too long to be reproduced in full, but in view of its importance some parts of it are given here:[1]

The growing popular discontent, particularly among munition workers, leads us to call attention to conditions in the food supply which demand speedy remedial action, because, in our opinion, they are the cause of the discontent observable everywhere.

Of the 1,300 or so establishments employed on war work in our town some 350 employ over 50 workmen and 6 over 1,000. Our large establishments, like Krupp's and other establishments, have bought foodstuffs themselves and sold them to their employees in addition to the foodstuffs rationed to the general population. As a rule, the armament firms, in order to get food supplies, have paid prices in excess of the maxima. Some firms have sold to their workmen at the legal retail prices, paying the difference themselves; others have sold at cost price, thus in some cases exceeding the maximum prices. Hence the smaller establishments have asked the communes to secure to their workers advantages similar to those enjoyed by employees in the larger estab-

[1] Vorwärts. Berlin, Dec. 16, 1917.

lishments, since they themselves were unable to buy on a large enough scale. The military inspectors supported this demand, and in order to prevent discontent we were compelled to buy food in the open market for distribution to the smaller establishments, even at prices exceeding the maximum prices. Most of the foodstuffs bought by us were from abroad. In order to keep within the law we repeatedly asked for import permits, but in vain. We did at least succeed in effecting a certain equalization between the workers in large and in small establishments and prevented, at all events, general unrest among the working classes, so that till the beginning of October matters were fairly satisfactory; but since then great discontent has manifested itself, because the large firms, owing to the growing scarcity, have bought up all obtainable foodstuffs. Many urban communes have done likewise, and those which have tried, at least in the main, to keep the law are faced by insoluble problems in the future. These conditions are due to the utter breakdown of the economic system of the imperial food authorities, as we will show in detail by single foodstuffs:

Grain and flour.—The grain and flour supply is admittedly based on a sound foundation, but a weak spot in the organization is the permission to certain estates to trade freely in seeds. The result is that large quantities of grain find their way into the market through the seed farms. We frequently receive from speculators offers of seeds for use as food without a seed voucher. Sometimes as much as 3,000 centners (3,306.9 hundredweight) or over are offered, prices up to 200 marks [1] per centner [2] ($43.18 per hundredweight) being asked for wheat, oats, and barley. These are not wild offers; delivery is guaranteed.

Pulse.—Seed peas, beans, horse beans, and vetch have been offered us at prices ranging from 140 to 260 marks per centner ($30.23 to $56.14 per hundredweight) without a seed voucher. When we declined them they were bought by another commune of Greater Berlin. The quantity amounted to 3,100 centners (3,417.1 hundredweight).

Potatoes.—The potato supply is also systematically organized, but a weak spot is left in so far as potatoes not requisitioned for the cities are left for free trade, and are bought at considerably above the maximum prices. Rhenish industrial towns have now bought potatoes in such quantities that they can supply more than the legal ration; and they have done this by paying prices of 6.7 marks per centner (86.8 cents per bushel) instead of the legal producers' price, plus speed bonus, of 5.5 marks (71.3 cents per bushel), and by allowing the growers for storage 50 pfennigs per centner per month (6.5 cents per bushel). They have also supplied coal to the delivering growers' unions. Now importing unions have been advised by the Imperial Potato Office to secure by delivery contracts potatoes not obtained on December 15. If they wish to get potatoes by this method, communes will have to make similar offers; otherwise the contracts will not be carried out. But how, then, are potatoes to be sold at the prescribed retail price without enormous subsidies from the municipal funds?

Vegetables and fruit.—The permission accorded to large firms, etc., to conclude cultivation and delivery contracts for vegetables has had the effect of creating a very unwelcome competition with the communes, for to these firms, with their enormous profits, money was no object, and even in making contracts they considerably exceeded the maximum prices. Moreover, the ammonia which most of them were able to offer to growers was an additional assistance in making contracts.

But even among communes themselves there was a wild competition, leading to disregard of the regulation; and only those communes which had ammonia to dispose of were able to obtain considerable quantities of vegetables by contracts. One Berlin commune with 900 centners (992.07 hundredweight) of ammonia obtained enough vegetables to supply them to families for winter storage by the half centner, whereas in other communes there is now a dearth of vegetables.

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[1] $47.60.

[2] A centner of wheat is 1.837 bushels; of oats is 3.445 bushels; and of barley is 2.296 bushels.

About the middle of September matters became intolerable. Since in addition to the vegetables secured by contracts others could be sold in the open market at exorbitant prices, growers were tempted to deliver, not to holders of their contracts, but to the open market. Hence, of our total contracted quantity of 260,000 centners (286,598 hundredweight) in autumn vegetables alone, we received only 5,000 to 10,000 centners (5,511.5 to 11,023 hundredweight) and were compelled to buy in the open market against the competition of the big industrial firms and at prices above the maxima, prices rising from day to day, particularly as live-stock keepers were buying up vegetables to give to their cattle, owing to the fodder shortage.

Even official bodies were unwilling to let us have vegetables at the fixed prices, but demanded in addition allowances of all kinds, sometimes 50 per cent above the maxima. Finally, at the present time both State and imperial offices are selling vegetables to their staff at prices much above the maxima.

We inclose a note of our purchases, forced upon us by prevailing conditions, at prices above the maxima; only in this way were we able to satisfy the enormous demand for vegetables, and so in some measure to stem the unrest, which was largely due to discontent at the ample supply of vegetables in the other commune referred to above. Our food expert represented to the authorities that in order to redress inequalities we ought to receive a larger supply of other foods, but this caused opposition in other communes, and the authorities could give us no assurance.

Milk.—Greater Berlin is receiving even smaller supplies of milk. This is due mainly to a fodder shortage; but the Greater Berlin Fat Office has had recourse to a bonus system, which has already had a measure of success.

Cheese.—Prices are fixed imperially for all varieties, but nobody regards them. In butter shops cheese is not to be had at these prices, but in all restaurants cheese is obtainable, because restaurant keepers are not bound by the prices. We are daily offered (and have had to accept the offers in order to supply small industrial establishments) all kinds of cheese at prices at least 100 per cent above the maximum prices.

Meat supply.—The distribution is determined by the quantities of animals assigned for slaughter to the Livestock Dealers' Union. At times, especially last September, the deliveries were irregular; those of hogs have considerably declined, from a weekly average of 450 to at most 50, and in September no pork could be distributed at all. The increased prices for young pigs, intended to cause more slaughtering, have not affected the direct regular supply. We, like other towns, bought some 5,000 young pigs in September and October, when the country people were getting rid of them in large quantities, but we had to pay 1.9 marks per pfund (41 cents per pound) instead of the legal 1.6 marks (35.1 cents per pound). Although the trade in live stock is confined to the organizations created for the purpose, pigs can not be had at the maxima, but they can be bought by the thousands from the same organizations when higher prices are offered; and a similar state of things exists as regards cattle. Large firms buy animals for their employees at exorbitant prices; and naturally workers not favored are discontented.

Meat preparations, fat, and butter.—The Hindenburg Fund for the Fat Supply of Workers in War Industries, from which so much was hoped, was so utter a failure, so far as we are concerned, that we had combined the first and second consignments in order to distribute 225 grams (7.9 ounces) per capita. As Greater Berlin firms received considerably larger quantities we were compelled by the importunity of the munitions industry to buy meat preparations, fat, and butter from abroad through the agency of private dealers, at prices ranging from 8 to 15 marks per ½ kilogram ($1.73 to $3.24 per pound); but for the last three weeks we have had to leave the market to the big industrial firms, which pay prices quite beyond the reach of the workers.

Fodder.—As regards oats, the system is in general satisfactory, though there must be a gap somewhere, since in illicit trade oats are sold at 100 to 140 marks per centner

($6.91 to $9.67 per bushel) instead of the legal 20 marks ($1.38 per bushel). Conditions are intolerable as regards hay, straw, and chaff. When the greater part of the fodder harvest was requisitioned for army needs, most districts were closed, and the towns received export permits for particular districts to cover the small quantities allowed them. As soon as a few districts were opened again free trade was possible for stocks not requisitioned; and as the quantity was small there was fierce competition, and the maximum prices went to the winds. Neukölln bought at the following prices per centner: Hay 9.75 to 12.2 marks ($42.10 to $52.68 per ton), instead of the legal maximum, 3.4 marks ($14.68 per ton); straw 6 marks ($25.91 per ton), instead of the legal maximum, 4 to 4.5 marks ($17.27 or $19.43 per ton); chaff 7 marks ($30.22 per ton), instead of the legal maximum, 5 marks ($21.59 per ton). And even so it was not possible to obtain the whole quantity assigned, since dealers preferred to sell to private customers, who paid still higher prices.

The net result is a competition between industry and municipalities, which is taken full advantage of by profiteers, who know that their victims will not reveal their own illegal acts. In a meeting held by the State distribution office for Greater Berlin it was established that all the Greater Berlin communes there represented had exceeded the maximum prices for vegetables. Communes which abstain from such illegalities incur the risk of finding their own citizens worse provided for than others.

We conclude that these conditions urgently demand redress. Above all, the system of delivery contracts is quite unfitted to produce a uniform distribution, and illicit trade can be prevented only if all foodstuffs are officially requisitioned and individual foodstuffs not subjected to a mixed system of free trade and official control.

It is well known that privations can be borne fairly easily when we know that others are sharing them, but inequalities lead to bitter indignation. Uniform distribution is what the time demands. Matters can only be put right by requisitioning all foodstuffs at the place of production, which should be done not merely, as in war companies, by persons interested, but by impartial supervisory officials. We therefore recommend the following measures:

(1) The producing centers, delivery unions, distributing centers, etc., to be subjected to a supervisory commission of six members, of whom at least four must belong to consuming circles. For the delivery of agricultural products the four consumers' representatives must be taken from the districts of the importing unions; of industrial products, from the trade-unions of the industry in question. The commission shall be attached as an advisory and controlling authority in rural delivering districts to the Landrat [highest administrative official in rural districts]; in industrial producing districts, to the chairman of the competent distributing authority for the war company. Its decisions must be carried out by the head of the delivering, producing, or distributing authority, with reservation to him of the right of objection. In case of objection the War Food Bureau is to decide.

(2) All foodstuffs to be requisitioned and left to the control of the importing authorities. Seeds to be controlled by the supervisory commission and distributed according to agricultural requirements.

(3) In larger residential and industrial areas the food distribution must be in uniform quantities and according to a uniform system. Hence uniform food distributing offices must be appointed for these districts.

We express the hope that the War Food Bureau, in view of the intolerable conditions, which must certainly lead to a catastrophe, will speedily take suitable measures to eliminate the causes of discontent. The municipal bodies have unanimously declared that it is their first duty to supply the populace with such food as is procurable, and that they are determined to pursue this end by the legal[1] methods already adopted,

[1] Illegal is evidently meant.

unless the War Food Bureau speedily provides a remedy, even though this should mean the economic ruin of the municipalities through the payment of usurious prices which they can not charge upon the poorer classes.

We ask you to admit a committee of six appointed by us to a discussion of existing conditions.

The Vorwärts, which, ever since its publication of the above memorial, has devoted special attention to the subject of illegal trading and profiteering, quoting from a report of a meeting in the Imperial Fruit and Vegetable Office held since the Neukölln revelations and attended by representatives of the Greater Berlin food committees, the Usury Office, and the police authorities, states [1] that the food expert of a western Berlin suburb described the memorial as very calm and true to facts, and said he had experienced much worse things lately.

In reply to a demand for an alteration in the system, the chairman of the meeting, a Regierungsrat, stated that no alteration would be made. At the conclusion of his remarks he said that the observance of maximum prices at present could not be thought of. The communes were right to exceed them until an end was put to the competition of the large industrial establishments. But this proceeding must go on only for a definite period, which would be made known later. After that there must be no more exceeding of the maximum prices. Vorwärts comments:

What a situation for the public prosecutor. The legal authorities have announced their intention of prosecuting all offenses against maximum price legislation, and meanwhile the imperial authorities, with the express consent of the Usury Office and of the police authorities, decide that for the time being maximum prices may be exceeded. Not only so, but the presiding Regierungsrat states that nothing will be altered in the system, and stopped all debate on this point. The nation will certainly conclude that there is no serious desire to improve matters. Who can doubt that offenses will still go on after the certain period has elapsed? The people that ask for bread are being played with. When the Reichstag meets shortly, let it see if a solid structure can be erected out of the ruins of the present food policy. But certainly things can no longer go on without thoroughly drastic measures.

Meanwhile the authorities continue on their ill-advised course of bullying the municipalities without (so far as can be seen) taking any serious steps either to remove the causes of the prevailing abuses or to interfere with the activities of the great armament firms. Vorwärts learns [2] that the public prosecutor has brought an action against Mayor Kaiser and Municipal Councillor Mier, of Neukölln, for exceeding maximum prices, and against Municipal Councillor Adam for evasion of the seed-corn order. Vorwärts says:

It appears that the Neukölln municipal administration will be made responsible even for transgressions not actually committed. The municipal authorities recently purchased a number of carloads of white cabbage at a price above the maximum, viz.,

[1] Vorwärts. Berlin, Jan. 13, 1918.

[2] Idem, Jan. 9, 1918.

11 marks per centner ($2.38 per hundredweight). However, Neukölln never got this cabbage, the firm of Krupp paying 17 marks per centner ($3.67 per hundredweight), and thus acquiring the goods. Nothing is so far known of any action against Krupp. Perhaps it will be the irony of fate that Neukölln will be punished, while Krupp von Bohlen will be given a distinction for showing such solicitude for his workers. Even the War Department has tried to profit by such transactions. We learn that the War Department quite recently was offered ham and sausages at 14 marks per half kilogram ($3.02 per pound), which were bought up at once.

If the public prosecutor means to take proceedings against all authorities and big firms guilty of exceeding the maximum prices, a great number of judicial officials will have to be released from active military service to cope with the mass of work. Or are the people of Neukölln only to be treated as transgressors of the law and the profiteers to go unscathed?

THE GENERAL FOOD SITUATION.

During the month of January of the present year, though the German press contains a good many items relating to the food supply, there was no change in the general situation. The most important review of the food situation noticed by the writer is a speech made to the Saxon Agricultural Council by Undersecretary of State von Braun.[1]

He admitted failures in the present system, but said that it could not be radically altered. To restore free trade in foodstuffs was impossible, for it would run the prices up so high that many people, especially those of the middle classes and those with a fixed income, would not be able to pay them. The proposal to grant State aid to such was impracticable, for the cost would run into billions. Therefore maximum prices and public control of foodstuffs must continue.

The speaker stated that the new proposals for putting the control into the hand of agricultural organizations could not in any case be put into operation before the next harvest year. (According to the Dresden correspondent of the Münchner Neueste Nachrichten, the Saxon Government has the gravest doubts about the new proposals, deeming them in many cases impracticable.)

As to present conditions he said:

We shall get through all right with the bread grain, thanks to the early threshing arrangements which must be repeated in 1918. Whether there will again be a temporary reduction of the bread ration is not yet clear; it would then again have to be replaced by increased rations of other foodstuffs. The manufacture of barley and oat preparations must unfortunately be restricted, because the harvest was poor and there are insuperable difficulties in the way of a sufficient supply of raw materials and coal to the factories. The potato supply for the winter is assured; there are also sufficient stocks to maintain till April the present ration and to provide material to eke out the bread supply. The supply of milk, butter, and fat is not very hopeful. The present meat ration can be maintained, at any rate for the present.

This, according to his view, is not a very cheering utterance, and one may infer from it that there is at least considerable likelihood of

[1] Münchner Neueste Nachrichten. Munich, Jan. 29, 1918. Morning edition.

a reduction of the bread ration in the spring, and that a reduction of the potato ration after April and of the meat ration at almost any time is by no means improbable. The cumulative weight of evidence contained in articles in the German press published during January goes to indicate a continued deterioration both in the actual state and in the future prospects of the German food supply. The months from March to June are always the most trying, and, failing help from the Ukraine or elsewhere, the coming spring will almost certainly bring the severest privations which Germany has yet had to endure.

CROP PROSPECTS.

The Frankfurter Zeitung[1] contains the following crop report:

The warm weather has thawed the snow in the fields almost everywhere, and in many parts of Germany has so far softened the ground that plowing for the spring cultivation has again become possible. According to the reports to hand, the appearance of the autumn crops, especially of the rye fields, is very good. The first half of the winter, therefore, seems to have passed without deterioration, though the most dangerous months are undoubtedly still to come. There is not yet very much trace in the consignments of bread grain of any effect of the warning to farmers mentioned in earlier reports, and repeated in the meantime, that on March 1 the prices of grain would be lowered. On the other hand the offer of seed grain has undoubtedly improved a little, and, indeed, as the season advances rather better supplies seem to be forthcoming of several kinds of stocks.

FOOD RATIONS.

Food rations are generally fixed by the Imperial War Food Bureau, on the basis of the estimated supply, for the entire Empire. In practice, however, the food rations apportioned to the civilian population of the individual localities vary greatly from locality to locality and are dependent on the actual supply on hand.

A table compiled from the local German press showing the average weekly rations of principal foodstuffs in 24 representative towns during the four weeks ending August 26, 1917, has been given in Bulletin No. 242 (pp. 63, 64) of this bureau. Like data have been compiled for the four weeks ending December 30, 1917, and are given in the table below. In many cases the rations shown in the table are the maximum rations, the actual rations depending on the available supply. Hamburg professes to publish only the actual rations available for distribution. Brunswick, on the other hand, qualifies nearly every amount with the condition "if sufficient supplies are in the hands of the authorities." It will be noticed that for several towns the list is very incomplete. All rations which could be obtained from the press were noted, but only a few towns (Hamburg, Altona, Berlin, and Gladbach) publish complete lists. In the case of all other towns the rations had to be taken

[1] Frankfurter Zeitung. Frankfort on the Main, Feb. 3, 1918. Morning edition.

from announcements in the advertisement columns and elsewhere. Naturally these announcements refer mainly to special distributions of foodstuffs and not to staple foods. The table does not include special supplementary rations for children, nursing mothers, and sick people.

AVERAGE WEEKLY RATIONS OF PRINCIPAL FOODSTUFFS IN 23 REPRESENTATIVE GERMAN TOWNS FOR THE FOUR WEEKS ENDING DECEMBER 30, 1917.

[Compiled from the local German papers. Blanks mean that it is not known what (if any) rations are given; in many cases, of course, there may be no ration of the food in question. A star means that a ration is known to be given, but the amount is not stated.]

City.	Bread.	Flour.	Hulled barley.	Groats.	Grits.	Farinaceous foods.	Fresh meat.	Sausage.	Fish.
	Lbs. ozs.	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*
Aix-la-Chapelle	4 6	1¾	1.75	1.75			7	1.75	0.87
Altona	3 15	3½					7	3.50	
Berlin	4 4¼			.87			8.75		
Charlottenburg	4 4¼			.87			8.75		
Schöneberg	4 4¼		.87	1.09		.87	8.75		
Wilmersdorf	4 4¼		.87	1.09			8.75		
Bremen	4 4¼	1		1.09		1.09	8.75		
Breslau	4 6		(*)	(*)		(*)	8.75		
Brunswick	4 2½	(*)	(*)				8.75		
Dresden	4 6		1.09	2.19			7	1.75	
Düren	3 13¼						7	1.75	
Düsseldorf	3 13¼				.87	.87	6.12	2.62	.87
Frankfort on the Main	(*)			2.19			7	1.75	
Gladbach	4 6			.87		.87	5.25	3.50	(*)
Hamburg (urban)	4 3¼					1.40	8.75		
Hamburg (rural)	4 4¼		.70			1.05	7		
Hanover	(*)	2¼		2.19		2.19			
Kiel	3 15	2.6	1.75						
Krefeld	3 13¼			8.75			7	1.75	
Leipzig	(*)			4.37	4.37		7	1.75	
Magdeburg	(*)		1.09						2.19
Munich	4 6		1.75	.87		1.75	8.75		
Stuttgart	4 4¼		.87		.87		8.75		

City.	Eggs.	Butter.	Margarine.	Edible fat.	Cheese.	Potatoes.	Vegetables.	Leguminous products.	Sugar.
	Average number.					*Lbs. ozs.*	*Lbs.*		
Aix-la-Chapelle	½	2.19			1.09	7 10½			6.12
Altona		1.75	1.05		1.09	7 1¾			6.12
Berlin	¼	1.05	1.75			7 10½			8.75
Charlottenburg		1.05	1.75			7 10½	[1] 5 to 10		6.06
Schöneberg		1.05	1.75			7 10½			6.12
Wilmersdorf		1.05	1.75			7 10½			6.12
Bremen	¼	1.75	1.05			7 10½	(*)		5.69
Breslau	¼	(*)				7 1¾			6.12
Brunswick	½	2.80			4.37	7 10½		(*)	6.12
Dresden	¾	.54	2.37		4.37	7 10½			
Düren			1.75			8 7½			
Düsseldorf	½	.54	1.64			7 10½			6.12
Frankfort on the Main	¾		1.75		.87				6.12
Gladbach			2.19			7 10½			6.30
Hamburg (urban)	¼	1.05	2.10			7 1¾			5.69
Hamburg (rural)		.87	3.85			7 10½		.70	6.12
Hanover		2.27							6.12
Kiel	¼	2.27			1.09	7 10½			6.12
Krefeld	½	.54	1.53			7 10½			(*)
Leipzig	¼		2.45			7 10½			
Magdeburg		1.18	.44		.52	7 10½			
Munich	1	2.62			3.50	7 10½			6.12
Stuttgart	¾	2.19		1.09	2.19	7 10½			5.33

[1] Cabbage.

AVERAGE WEEKLY RATIONS OF PRINCIPAL FOODSTUFFS IN 23 REPRESENTATIVE GERMAN TOWNS FOR THE FOUR WEEKS ENDING DECEMBER 30, 1917—Concluded.

City.	Artificial honey.	Sirup.	Jam.	Coffee substitutes.	Soup.	German tea.	Heavy workers.	
							Potatoes.	Bread.
	Ounces.	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Ounces.*	*Lbs. ozs.*	*Lbs. ozs.*
Aix-la-Chapelle			7	2.19				
Altona	2.19		2.19				2 11¾	
Berlin	2.19		4.37	(*)	0.87			
Charlottenburg	1.09		4.37		1.09			
Schöneberg	4.37	.87	4.37	6.56	1.09			
Wilmersdorf	2.19		4.37					
Bremen			5.69				3 4½	
Breslau			(*)		(*)		2 3 to 3 4½	
Brunswick								
Dresden	3.27		6.30		2.19			
Düren			4.37	.44				
Düsseldorf	1.31		6.12		.44			1 6
Frankfort on the Main			2.19					
Gladbach			3.50	.87				
Hamburg (urban)			7	8.75		1.75	2 11¾	
Hamburg (rural)			2.19	1.09			3 4½	1 8½
Hanover	2.19		4.37					
Kiel			4.37	2.19				1 15½
Krefeld			4.16	3.93	.87			
Leipzig	(*)							
Magdeburg	1.09		2.19	(*)				
Munich	4.37			2.19				
Stuttgart	1.09		1.75		.65			

LABOR AND THE WAR.

NATIONAL WAR LABOR BOARD—ITS PURPOSE AND FUNCTIONS.

The War Labor Conference Board,[1] appointed by the Secretary of Labor to aid in the formulation of a national labor program, submitted its report under date of March 29, 1918. The recommendation made by this board is that there be created, for the period of the war, a national war-labor board whose primary duty shall be to handle all questions in dispute between employers and employees, to the end that maximum production may be maintained.

This National War Labor Board has been formally created by the President, who, in a proclamation issued on April 8, designated as members thereof the same representatives of employers and employees who, together with ex-President William H. Taft and Frank P. Walsh, as chairmen, representing the public interests, had composed the War Labor Conference Board whose recommendation was thus consummated. The President's proclamation is as follows.[2]

Whereas, in January, 1918, the Secretary of Labor, upon the nomination of the president of the American Federation of Labor and the president of the National Industrial Conference Board, appointed a War Labor Conference Board for the purpose of devising for the period of the war a method of labor adjustment which would be acceptable to employers and employees; and

Whereas said board has made a report recommending the creation for the period of the war of a national war labor board with the same number of members as, and to be selected by the same agencies, that created the War Labor Conference Board whose duty it shall be to adjust labor disputes in the manner specified, and in accordance with certain conditions set forth in the said report; and

Whereas the Secretary of Labor has, in accordance with the recommendation contained in the report of said War Labor Conference Board dated March 29, 1918, appointed as members of the National War Labor Board Hon. William Howard Taft and Hon. Frank P. Walsh, representatives of the general public of the United States; Messrs. Loyall Z. Osborne, L. F. Loree, W. H. Van Dervoort, C. E. Michael, and B. L. Worden, representatives of the employers of the United States; and Messrs. Frank J. Hayes, William L. Hutcheson, William H. Johnston, Victor A. Olander, and T. A. Rickert, representatives of the employees of the United States;

Now, therefore, I, Woodrow Wilson, President of the United States of America, do hereby approve and affirm the said appointments and make due proclamation thereof, and of the following for the information and guidance of all concerned:

The powers, functions, and duties of the National War Labor Board shall be: To settle by mediation and conciliation controversies arising between employers and workers in fields of production necessary for the effective conduct of the war, or in

[1] An account of the appointment of this board appeared in the MONTHLY REVIEW for April, 1918, pp. 103 to 105.

[2] Official Bulletin, Apr. 10, 1918.

other fields of national activity, delays and obstructions which might, in the opinion of the national board, affect detrimentally such production; to provide, by direct appointment or otherwise, for committees or boards to sit in various parts of the country where controversies arise and secure settlement by local mediation and conciliation; and to summon the parties to controversies for hearing and action by the national board in event of failure to secure settlement by mediation and conciliation.

The principles to be observed and the methods to be followed by the national board in exercising such powers and functions and performing such duties shall be those specified in the said report of the War Labor Conference Board dated March 29, 1918, a complete copy of which is hereunto appended.

The national board shall refuse to take cognizance of a controversy between employer and workers in any field of industrial or other activity where there is by agreement or Federal law a means of settlement which has not been invoked.

And I do hereby urge upon all employers and employees within the United States the necessity of utilizing the means and methods thus provided for the adjustment of all industrial disputes, and request that during the pendency of mediation or arbitration through the said means and methods there shall be no discontinuance of industrial operations which would result in curtailment of the production of war necessities.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the District of Columbia, this eighth day of April, in the year of our Lord one thousand nine hundred and eighteen, and of the independence of the United States the one hundred and forty-second.

The following is the text of the report of the War Labor Conference Board as submitted to the Secretary of Labor on March 29:[1]

Hon. William B. Wilson,

Secretary of Labor.

Sir: The commission of representatives of employers and workers, selected in accord with the suggestion of your letter of January 28, 1918, to aid in the formulation in the present emergency of a national labor program, present to you as a result of their conferences the following:

(*a*) That there be created for the period of the War a National War Labor Board of the same number and to be selected in the same manner and by the same agencies as the commission making this recommendation.

(*b*) That the functions and powers of the national board shall be as follows:

1. To bring about a settlement, by mediation and conciliation, of every controversy arising between employers and workers in the field of production necessary for the effective conduct of the War.

2. To do the same thing in similar controversies in other fields of national activity, delays and obstructions in which may, in the opinion of the national board, affect detrimentally such production.

3. To provide such machinery, by direct appointment or otherwise, for selection of committees or boards to sit in various parts of the country where controversies arise to secure settlement by local mediation and conciliation.

4. To summon the parties to the controversy for hearing and action by the national board in case of failure to secure settlement by local mediation and conciliation.

(*c*) If the sincere and determined effort of the national board shall fail to bring about a voluntary settlement, and the members of the board shall be unable unanimously to agree upon a decision, then and in that case, and only as a last resort, an

[1] Official Bulletin, Apr. 1, 1918.

umpire appointed in the manner provided in the next paragraph shall hear and finally decide the controversy under simple rules of procedure prescribed by the national board.

(*d*) The members of the national board shall choose the umpire by unanimous vote. Failing such choice, the name of the umpire shall be drawn by lot from a list of 10 suitable and disinterested persons to be nominated for the purpose by the President of the United States.

(*e*) The national board shall hold its regular meetings in the city of Washington, with power to meet at any other place convenient for the board and the occasion.

(*f*) The national board may alter its methods and practice in settlement of controversies hereunder from time to time as experience may suggest.

(*g*) The national board shall refuse to take cognizance of a controversy between employer and workers in any field of industrial or other activity where there is by agreement or Federal law a means of settlement which has not been invoked.

(*h*) The place of each member of the national board unavoidably detained from attending one or more of its sessions may be filled by a substitute to be named by such member as his regular substitute. The substitute shall have the same representative character as his principal.

(*i*) The national board shall have power to appoint a secretary and to create such other clerical organization under it as may be in its judgment necessary for the discharge of its duties.

(*j*) The national board may apply to the Secretary of Labor for authority to use the machinery of the department in its work for conciliation and mediation.

(*k*) The action of the national board may be invoked in respect to controversies within its jurisdiction by the Secretary of Labor or by either side in a controversy or its duly authorized representative. The board, after summary consideration, may refuse further hearing if the case is not of such character or importance to justify it.

(*l*) In the appointment of committees of its own members to act for the board in general or local matters, and in the creation of local committees, the employers and the workers shall be equally represented.

(*m*) The representatives of the public in the board shall preside alternately at successive sessions of the board or as agreed upon.

(*n*) The board in its mediating and conciliatory action, and the umpire in his consideration of the controversy, shall be governed by the following principles:

There should be no strikes or lockouts during the War.

1. The right of workers to organize in trade-unions and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the employers in any manner whatsoever.

2. The right of employers to organize in associations of groups and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the workers in any manner whatsoever.

3. Employers should not discharge workers for membership in trade-unions, nor for legitimate trade-union activities.

4. The workers in the exercise of their right to organize shall not use coercive measures of any kind to induce persons to join their organizations, nor to induce employers to bargain or deal therewith.

1. In establishments where the union shop exists the same shall continue and the union standards as to wages, hours of labor, and other conditions of employment shall be maintained.

2. In establishments where union and nonunion men and women now work together, and the employer meets only with employees or representatives engaged in said establishments, the continuance of such condition shall not be deemed a grievance. This declaration, however, is not intended in any manner to deny the right or dis-

courage the practice of the formation of labor unions, or the joining of the same by the workers in said establishments, as guaranteed in the last paragraph, nor to prevent the War Labor Board from urging, or any umpire from granting, under the machinery herein provided, improvement of their situation in the matter of wages, hours of labor, or other conditions, as shall be found desirable from time to time.

3. Established safeguards and regulations for the protection of the health and safety of workers shall not be relaxed.

If it shall become necessary to employ women on work ordinarily performed by men, they must be allowed equal pay for equal work and must not be allotted tasks disproportionate to their strength.

The basic eight-hour day is recognized as applying in all cases in which existing law requires it. In all other cases the question of hours of labor shall be settled with due regard to governmental necessities and the welfare, health, and proper comfort of the workers.

The maximum production of all war industries should be maintained, and methods of work and operation on the part of employers or workers which operate to delay or limit production, or which have a tendency to artificially increase the cost thereof, should be discouraged.

For the purpose of mobilizing the labor supply with a view to its rapid and effective distribution, a permanent list of the number of skilled and other workers available in different parts of the Nation shall be kept on file by the Department of Labor, the information to be constantly furnished:

1. By the trade-unions.
2. By State employment bureaus and Federal agencies of like character.
3. By the managers and operators of industrial establishments throughout the country.

These agencies should be given opportunity to aid in the distribution of labor, as necessity demands.

In fixing wages, hours, and conditions of labor regard should always be had to the labor standards, wage scales, and other conditions prevailing in the localities affected.

1. The right of all workers, including common laborers, to a living wage is hereby declared.
2. In fixing wages, minimum rates of pay shall be established which will insure the subsistence of the worker and his family in health and reasonable comfort.

LOYALL A. OSBORNE.	FRANK J. HAYES.
L. F. LOREE.	WM. L. HUTCHESON.
W. H. VAN DERVOORT.	THOMAS J. SAVAGE.
C. E. MICHAEL.	VICTOR A. OLANDER.
B. L. WORDEN.	T. A. RICKERT.
WM. H. TAFT.	FRANK P. WALSH.

At the conclusion of the deliberations of the War Labor Conference Board the following statement was issued by ex-President Taft:

I am profoundly gratified that the conference appointed under the direction of Secretary Wilson has reached an agreement upon the plan for a National Labor Board to maintain maximum production by settling obstructive controversies between employers and workers. It certainly is not too much to say that it was due to the self-restraint, tact, and earnest patriotic desire of the representatives of the employers and the workers to reach a conclusion. I can say this with due modesty, because I was not one of such representatives. Mr. Walsh and I were selected as representatives of the public. Personally it was one of the pleasant experiences of my life. It brought me into contact with leaders of industry and leaders of labor, and my experience gives me a very high respect for both. I am personally indebted to all of the board, but

especially to Mr. Walsh, with whom, as the only other lawyer on the board, it was necessary for me to confer frequently in the framing of the points which step by step the conference agreed to. Of course, the next question is "Will our plan work?" I hope and think it will, if administered in the spirit in which it was formulated and agreed upon.

In a statement issued at the same time Frank P. Walsh said:

The plan submitted represents the best thought of capital and labor as to what the policy of our Government with respect to industrial relations during the War ought to be. Representing capital were five of the largest employers in the Nation, but one of whom had ever dealt with trade unions, advised and counseled by ex-President Taft, one of the world's proven great administrators and of the very highest American type of manhood. The representatives of the unions upon the board were the national officers of unions engaged in war production and numbering in their ranks considerably over 1,000,000 men and women.

The principles declared might be called an industrial chart for the Government, securing to the employer maximum production and to the worker the strongest guaranty of his right to organization and the healthy growth of the principles of democracy as applied to industry as well as the highest protection of his economic welfare while the war for human liberty everywhere is being waged. If the plan is adopted by the Government, I am satisfied that there will be a ready and hearty acquiescence therein by the employers and workers of the country, so that the volume of production may flow with the maximum of fruitfulness and speed. This is absolutely essential to an early victory. The industrial army, both planners and workers, which are but other names for employers and employees, is second only in importance and necessity to our forces in the theater of War. Their loyal cooperation and enthusiastic effort will win the War.

UNITED STATES EMPLOYMENT SERVICE CONSERVING FARM LABOR.

During the agricultural season of 1917 farm laborers from the United States were recruited by the Canadian Government under an agreement entered into between the two Governments permitting free passage across the line. Many Canadian Government agents were in the field soliciting agricultural workers, the laborers being paid railroad fare to their places of employemnt and very liberal wages while working on the farms. In order to protect American farmers against this competition, a new arrangement has been made between the Canadian Government and the United States Department of Labor, based on last year's agreement but with an important exception noted in the following statement issued by the United States Department of Labor:

"At the beginning of the present season officials of the Canadian Government called upon the Department of Labor at Washington to propose a renewal of the previous year's agreement. The agreement was renewed, but a provision was inserted, at the suggestion of the United States Employment Service, under which the Canadian Government will not place recruiting forces in the field this year and instead will rely on supplies of surplus farm labor which will be sent

through offices of the United States Employment Service after the demands of American farmers have been met.

"Under the agreement above referred to the Canadian Government is advertising through a number of publications in the Middle West, asking that farm workers apply at United States Employment Service offices for opportunity. This advertising itself carries the agreed statement that farm labor will not be directed to Canada until local needs have been supplied, and this policy will be carried out by the United States Employment Service."

SECOND REPORT ON JOINT STANDING INDUSTRIAL COUNCILS, GREAT BRITAIN.

[From The Labour Gazette of the Ministry of Labor, Great Britain, March, 1918.]

The Second Report on Joint Standing Industrial Councils, which has been prepared by the Committee on Relations between Employers and Employed, has now been published.[1] This report deals especially with industries in which organization on the part of employers and employed is less completely established than in the industries covered by the previous report [2] and with industries in which such organization is weak or nonexistent.

For convenience of consideration the committee have divided the industries of the country into three groups:

Group A.—Consisting of industries in which organization on the part of employers and employed is sufficiently developed to render their respective associations representative of the great majority of those engaged in the industry.

Group B.—Comprising those industries in which, either as regards employers and employed, or both, the degree of organization, though considerable, is less marked than in Group A.

Group C.—Consisting of industries in which organization is so imperfect, either as regards employers or employed, or both, that no associations can be said adequately to represent those engaged in the industry.

In the more highly organized industries (Group A) the committee have, in their first report, proposed a triple organization of national, district, and workshop bodies. In industries where there are representative associations of employers and employed, which, however, do not possess the authority of those in Group A industries, they now propose that the triple organizations should be modified by attaching to each National Industrial Council one or at most two

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[1] Cd. 9002. Price 1d.

[2] Reprinted in Bulletin 237 of the U. S. Bureau of Labor Statistics, Industrial Unrest in Great Britain, pp. 229–237.

representatives of the Ministry of Labor to act in an advisory capacity. In industries in both Groups A and B they propose that unorganized areas or branches of an industry should be provided, on the application of the National Industrial Council and with the approval of the Ministry of Labor, with trade boards for such areas or branches, the trade boards being linked with the industrial council. In industries having no adequate organization of employers or employed, it is recommended that trade boards should be continued or established, and that these should, with the approval of the Ministry of Labor, be enabled to formulate a scheme for an industrial council which might include in an advisory capacity the "appointed members" of the trade board.

Briefly, the proposals are that the extent of State assistance should vary inversely with the degree of organization in industries. The committee do not, however, regard Government assistance as an alternative to the organization of employers and employed. On the contrary, they regard it as a means of furthering the growth and development of such organization.

The proposals which are set forth do not require legislation except on three points, namely, to provide: (1) That the trade boards shall have power, in addition to determining minimum rates of wages, to deal with hours of labor and questions cognate to wages and hours; (2) that the trade boards shall have power to initiate inquiries and make proposals to the Government departments concerned on matters affecting the industrial conditions of the trade, as well as on questions of general interest to the industries concerned respectively; (3) that when an industrial council sufficiently representative of an industry makes application, the Minister of Labor shall have power, if satisfied that the case is a suitable one, to make an order instituting for a section of the industry a trade board on which the industrial council shall be represented, or constituting the council a trade board under the Trade Boards Act.

The committee remark that their proposals must necessarily be adapted to meet the varying needs and circumstances of different industries, and do not anticipate that there will be uniformity in practice. Their recommendations are intended merely to set forth the main line of development believed to be essential to insure better relations between employers and employed. The application of the recommendations to the several industries can, the committee assert, be safely left to those intimately concerned, with the conviction that the flexibility and adaptability of industrial organizations which have been so large a factor in enabling industry to stand the enormous strain of the war will not fail the country when peace returns.

In a prefatory note it is stated that this report is now receiving the joint consideration of the Minister of Reconstruction and the Minister of Labor in the light of the practical experience which has been gained in establishing joint industrial councils in accordance with the proposals of the first report. A statement will shortly be published with regard to any modification of the recommendations of this second report which may be considered expedient from the administrative point of view.

WOMEN AGRICULTURAL WORKERS IN GREAT BRITAIN.

An important report on "Industry and Finance—War Expedients and Reconstruction" [1] has recently been published under the authority of the council of the British Association for the Advancement of Science. Following is a summary of one of the most interesting contributions to this document—the chapter dealing with women workers in agriculture:

When war conditions brought about a shortage of "pickers" and later on of male agricultural laborers, it was difficult to get women to fill their places as there was a strong prejudice, among both women and farmers, against women working on the land. The public mind associated such work with the evils of casual labor, with a poor class of workers, and a low state of progress. This attitude has been overcome to a considerable extent as a result of "the patriotism of the educated woman, who threw herself into the breach with spirit and self-sacrifice, demonstrating the possibilities of women's work on the land both by precept and example."

The employer has found the new type of woman workers, in general, more conscientious and intelligent than the customary worker, and this has created a favorable impression even when the inexperience of these women results in less rapid work. Educated women are in demand as farm hands, and there are often refusals to take any other type. The supply of such women is, of course, very limited.

The placing of women on the land proceeded very slowly during the first months of the war. In 1915, however, a movement was started at the instigation of the Board of Agriculture to organize women's agricultural committees or farm labor committees throughout England and Wales. At the close of 1916 most counties had committees of this kind. The Board of Trade's women agricultural officers and the sole woman officer of the Board of Agriculture, at that time appointed, kept in touch with these committees, visiting and encouraging them.

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[1] Industry and Finance—War Expedients and Reconstruction, edited by A. W. Kirkaldy. London (1917). 371 pp.

Toward the close of 1916 there were 4,000 registrars and some 1,000 district representatives, and thousands of public meetings had been held for the purpose of convincing the farmer and the village woman of the necessity of using her labor on the land. There is no doubt that this organization accounts largely for the great increase in local labor which undoubtedly took place in 1916.

Despite various efforts of a number of organizations, the finding and placing of women for permanent work on the land did not go forward rapidly.

This was partly due to the natural difficulties of the position and a little, perhaps, to a certain prejudice against labor exchanges. This was evidenced by the better results often obtained by a voluntary organization such as the Women's Land Service Corps (State aided) and by the direct work of placing, beginning to be carried on by the women's war agricultural committees.

At the beginning of 1917 a great impetus was given to the movement by the formulation of a scheme for the more extensive recruiting and training of women on a national basis. At the same time, the task of developing and extending the work of the women's war agricultural committees was undertaken by the Board of Agriculture, thus linking their work more closely with that of the county war agricultural committee (composed almost entirely of men), which worked under the auspices of the Board of Agriculture, and upon whose executives had been conferred very wide statutory powers.

The work of both these committees is now controlled by the new Department of Food Production, the work of the women's war agricultural committee being directed from the women's branch of the Board of Agriculture.

In March, 1917, the energies of the women's organization became concentrated on the effort to secure for the land a permanent body of women who should undertake service for the duration of the War under semimilitary conditions of mobilizing, etc., and be guaranteed to the farmer as strong and medically fit, having been in all cases selected with considerable care and, when necessary, trained in farm work for at least a month. In return for this, the farmer is expected to pay a minimum wage of 18s. ($4.38) per week or the current rate of the district, which ever is the highest.

The scheme was launched under national service, the actual work of receiving applications and calling up volunteers being carried out by the Minister of Labor.

The first members of the Women's Land Army were placed in employment about the beginning of May, and by the end of July more than 5,000 had been chosen from some 40,000 volunteers and enrolled for land service.

The replacement of men by women has been more direct in agriculture than in other industries, agricultural work being more individual and there being little opportunity under present circumstances for bringing about the adjustments and modifications which have been made in factories to adapt the tasks to women's strength.

Selection.—References, medical examinations, and interviews weed out the unsuitable volunteer at the outset; the period of training reveals cases of unsuitability; and, finally, the exigencies of actual employment test the strength of character and physique more than some are able to stand. Of some 20,000 applicants who had appeared before the selection and allocation committees up to September, only about one-third, viz, 6,500, therefore, were accepted. The great majority—nearly 5,000—required training, but about 1,500 were placed directly on the land.

Training.—There are two methods of training—

(*a*) That which may be regarded as a system of apprenticeship, whereby the volunteer, who has some knowledge of land work, is placed with an employer, who receives

her services free for three weeks, during which time she gains in knowledge and he instructs her in his own special methods. At the end of this time he takes her into ordinary employment at not less than 18s. [$4.38] per week. During apprenticeship the girl is maintained by the Government, as a bursar, at a cost not exceeding 15s. [$3.65] a week.

(*b*) That which is carried out by the board of agriculture at its special training centers, or by arrangement at certain agricultural colleges and farm institutes, or on private practice farms. The cost of this training with maintenance must not exceed 25s. [$6.08] per head per week for four weeks; and, in practice, varies from 15s.[$3.65] to 25s. [$6.08] and is very commonly carried out for 20s. [$4.87] or 21s. [$5.11].

In the beginning the training was generalized, but efforts are now being made to standardize the reports of instruction, etc., by establishing special tests. When the training exceeds four weeks, 4s. [97 cents] per week in addition to maintenance are granted to the trainee.

Placing.—The greatest care is taken to insure the maximum of safety and comfort for the worker on the land. A member of the organization is required to inspect and guarantee the place of employment and the place of lodging before a national service volunteer is allocated to it, and when placed, a welfare supervisor keeps in touch with her.

To avoid winter unemployment preparations were made to provide land workers for timber work, hay-baling, tree-pruning, etc.

In some sections there are so few cottages that the housing problem is acute. In most cases the farms are too scattered for the use of hostels for permanent workers. Women can seldom be put in the lodgings formerly occupied by men farm hands, and often where there are suitable accommodations the cottagers will not take in women land workers on account of the extra domestic burdens involved. The conclusion is reached that "it may become necessary to put in force the compulsory billeting bill."

Wages.—Although in general the guaranteed minimum wage of 18s. ($4.38) per week is not difficult to secure, the cost of subsistence is so high that it is practically impossible for the worker to maintain herself decently.

The following statement is made in this connection:

It is very much to be desired that the minimum should be raised at an early date. The present low rate of pay militates heavily against securing a sufficient number of suitable land workers, and it is very probably one of the chief reasons why not more than half of the original volunteers follow up their cards by appearing before a selection committee. * * * except for the comparatively few able women and willing to offer sacrifice on the altar of patriotism, food production must depend upon workers drawn from the less intelligent and less fit residue. This is, of course, only the current feminine aspect of the dire consequences of the wage disability under which agriculture has labored for so many years.

Since the establishment of the minimum wage, members of the Women's War Agricultural Committee in some counties have found it necessary to counteract its lowering effect by insisting—often with the ready collaboration of the farmers—upon

the payment of a minimum initial wage exceeding by at least 5s. [$1.22] per week the cost of maintenance. This generally necessitates a payment of 20s. [$4.87] or 21s. [$5.11] per week. The most profitable arrangement is undoubtedly that whereby the worker lives in, and is paid in addition a wage varying from 5s. [$1.22] to 10s. [$2.43] per week. As the Government supplies free outfit, free travel, and maintenance during a limited period of unemployment to the members of the Women's Land Army, they are just able to keep going. It should be noted that many of the more skilled and experienced workers are able to secure 25s. [$6.08] or even 35s. [$8.52] per week.

Among the higher type of volunteers it is clear that in addition to the earnest desire for patriotic service, "many feel the call of the land." It is not unusual to hear a worker declare, after experiencing for some time the real hardships of agricultural toil, that she would not under any circumstances return to her old life—it may be, that of a West End showroom girl.

Although the work of 1917 has resulted in adding to the ranks of agricultural labor a body of women with some claims to being skilled, it can not be definitely concluded that local labor was increased or improved during that year.

The farmer is still much in need of reliable seasonal help, which at the moment is supplied sporadically and unequally by soldiers, school children, and, more rarely, by prisoners.

The situation indicates that local labor still needs stimulating to the full and supplementing by gangs of imported women available as required and at short notice. On the other hand, there is not wanting signs of willful neglect of available and much needed labor to the great detriment of crops.

It may be reasonably expected that women "will constitute a permanent element on the land both at home and in our colonies as workers and wives under new and better conditions. War demands are doing away with the stigma attached to agricultural labor for women and are indicating the place women should hold "in the more highly skilled and intensive cultivation of the future."

LABOR RESETTLEMENT COMMITTEE, GREAT BRITAIN.

[From the Labour Gazette of the Ministry of Labor, Great Britain, March, 1918.]

The minister of labor has set up a committee, to be known as the Labor Resettlement Committee, to advise him on the problems arising out of the demobilization of the forces. The questions which will be referred to it include not only those connected with the resettlement of soldiers and sailors in civil life, but also those connected with the disbandment of munition workers, inasmuch as the restarting of industry after the War demands that these two sets of questions shall be treated on uniform lines. All schemes devised for dealing with these questions will be referred to the committee for their con-

sideration and advice before they are put into operation, and the committee will be closely associated with their administration. By this means the minister hopes to secure the cooperation of employers and trades-unions with the Government, which he regards as an essential condition for success. The committee's terms of reference are as follows:

To advise the Ministry of Labor on the resettlement of labor consequent upon the demobilization of the forces and the discharge of workers owing to the cessation of work connected with the war.

The first meeting of the committee took place on March 12.

The minister of labor, who presided, in opening the proceedings said that it was a matter of great satisfaction to him that he had been able to gather such a powerful and representative committee, representing as it did the employers and workpeople of the principal industries of the country as well as great associations like the Parliamentary Committee of the Trade-Union Congress, the Federation of British Industries, and the Associated Chambers of Commerce, which were closely concerned with all the general questions affecting industry as a whole. They would also have the assistance of the departments of State affected, such as the Admiralty, War Office, and Ministry of Munitions, which would enable them to obtain readily full information as to the position as far as the Government was concerned in regard to the Navy, Army, and civil workers. He felt that if his department was going to discharge successfully the onerous task which had been placed upon it by the War Cabinet of resettling into civil life the millions of men who were now fighting for us, and those other millions of men and women who were engaged in the production of munitions and in other essential services connected with the War, it would be necessary for them to be able to seek at every stage the advice of a body such as the committee before him, who would be competent to speak on behalf of industry. It was, therefore, his intention to avail himself to the fullest extent of the committee's services and to associate them very closely with the administrative work which the department would have to carry out. He could not, of course, devolve upon them the responsibility to Parliament and the country for the measures which would have to be adopted, but he did intend to ask them to share that responsibility with him to some extent by placing all those measures before them for their consideration and advice before they were adopted. He was afraid that when the time for resettlement arrived he might have to make considerable calls on the members of the committee, but he felt sure that they would agree with him in thinking that no task was more important for the future of industry and the country than that of restoring normal conditions as quickly and as early as

possible after the War. He felt that the War would have been largely fought in vain unless it produced a better state of society, in which the advantages of leisure and education were more equally and justly distributed throughout the whole population, but in order to bring this state of affairs about it was necessary to restore the prosperity of industry, which would largely depend on the success which attended the committee's labors.

Turning to the subjects with which the committee would be called upon to deal, he pointed out that there were two sets of questions which they would have to consider, though they constituted a single problem. First, there was the resettlement of sailors and soldiers to civil life, and secondly the resettlement of those who had been engaged in war industries. As regards the former, a subcommittee of the Reconstruction Committee had examined the matter with great care and they would be asked to consider the scheme which that committee recommended for adoption. He thought they would agree that the committee's work had been done well and that they had studied the question with great thoroughness. As regards civil workers, another committee appointed by the Reconstruction Department had been considering their case and are submitting two reports, which would shortly be laid before them. The question of the civil worker he regarded as being more difficult even than that of the soldier and sailor. Recent events, of which the committee would be aware, in connection with discharge of a certain number of munition workers, had brought this question up already in a concrete form. The position arising from these discharges, whether as regards the total numbers discharged or the prospect of finding fresh work, was not of a nature that need cause alarm, but it should be carefully watched, and he proposed to ask the committee to appoint a subcommittee whose function it would be to keep the matter under review.

Among the most important subjects for consideration by the committee would be the arrangements for providing out-of-work pay for ex-service men and others who were unemployed. In the case of ex-service men it was proposed to give a month's furlough with full pay and allowances, to be followed by a free policy of insurance against unemployment which would be valid during the succeeding year. The precise amount of the weekly rate of benefit was not yet settled, but it was proposed that it should be possible to draw benefit up to a total of 20 weeks during the year. The majority of civil war workers were already insured against unemployment, but the rate of benefit in their case was only 7s. ($1.70) a week, and though this was in many cases supplemented by voluntary insurance through trade-unions, the amount was clearly inadequate for any prolonged period

of unemployment. The best method of dealing with this difficulty and also of providing for the workpeople who were not at present covered by insurance was receiving careful consideration.

There was, further, the question of the machinery by which the schemes adopted were to be administered. The Government had decided that the work would have to be largely carried out by the employment exchanges, which were the only national organization capable of coping with the problem. We possessed a great advantage in having the organization of the employment exchanges ready to hand. He did not think, however, that the exchanges, or indeed any piece of official machinery, could carry out the task unaided. They, like the ministry itself, would need the constant advice and cooperation of the employers and workpeople in their districts. In order to secure this he and his predecessor had undertaken the formation of local advisory committees consisting in the main of an equal number of employers' and workpeople's representatives who would be associated with the work of the exchanges. Some 250 of these committees were already in working order and some of them had performed very valuable work, especially in the direction of finding employment for disabled men. Through the agency of these committees he hoped that the exchanges would be able to ascertain the demand for labor in their districts and to secure the cooperation of the local branches of the trade-unions in meeting it. He was sure that in order to obtain the best results it was necessary to utilize the trade-union organization to the fullest extent. He knew that some trade-unionists did not like using the exchanges, but he also knew many others who did, and he hoped that by a free interchange of information between the exchange and the local branches of the trade-unions through the latter's representatives on the local advisory committees it would be possible to deal successfully with these men. In other words, his view was that every scrap of machinery suitable for the purpose ought to be used in order to carry out the work of resettlement as smoothly and easily as possible, and he hoped that the committee would be able to give him very useful advice as to how coordination could best be secured over the whole field of industry.

There was another class of questions connected with resettlement which would have to be dealt with on a basis of industry. An important part of the scheme so far as the army was concerned was the classification of the various trades of the country according to their national importance and the immediate prospects of employment which they offered. In order to deal with this very difficult problem the Government would require the most complete and up-to-date information about the prospects as regards raw materials, financial facilities, and employment in all the principal industries. Again,

there were questions such as the arrangements for reinstating soldiers and munition workers in the industries from which they have gone, the arrangements in regard to substitutes who have been introduced in their places, the arrangements necessary to enable men whose apprenticeship or training had been interrupted by military service to resume their instruction so that they might become qualified as fully skilled men. All these were very difficult problems which could only be settled by each industry for itself, and it was in connection with these questions among others that the Government hoped to obtain very substantial assistance from the joint industrial councils which were in process of being set up in various industries, and the interim joint reconstruction committees which the Ministry of Reconstruction, the Board of Trade, and the Ministry of Labor were collaborating to bring into being in those industries which were not ready for the immediate formation of industrial councils. It was essential that these difficult questions to which he had referred should be carefully considered beforehand by joint bodies fully representative of the employers' organizations and the trade-unions in every important industry.

BILL FOR THE CREATION OF LABOR BOARDS IN GERMANY.[1]

The various federations of German trade-unions and of salaried employees have joined in laying before the Federal Council (Bundesrath) and the Reichstag the draft of a law for establishing labor boards which will come up for discussion during the present session of the Reichstag. Enactment of the bill seems assured as the new imperial chancellor, Count von Hertling, before taking office, had pledged the Government's support of the bill.

The proposal of establishing labor boards is by no means new. A bill creating such boards was submitted to the Reichstag by several parties in 1910, but on its second reading failed of passage, owing to the opposition of the Federated Governments to the rôle assigned in the bill to the workmen's secretariats. Since then various new considerations have made it seem expedient to abandon the bill of 1910 and to draft a new bill. First, the bill of 1910 provided for the creation of labor boards on purely occupational lines. In view, however, of the growth of occupational organizations of workmen and salaried employees and of the general recognition accorded to them the interest in occupational representation of the workmen has greatly diminished, while the need for general territorial representation of the workmen which guarantees comprehensive safeguarding of the general social interests of all occupational groups

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands. Vol. 27, No. 49. Berlin, Dec. 8, 1917.

has become more urgent. Second, there arose the necessity to enable the proposed labor boards to represent labor interests proper, because otherwise the workmen and salaried employees would be at a disadvantage as compared with the employers, to whom the legislation has already given official representation in the form of chambers of commerce, chambers of handicrafts, and chambers of agriculture. Third, the experiments made during the war have taught the workmen that it does not suffice to charge labor boards with the maintenance of industrial peace as an ideal, but that this task requires legal regulation and creation of positive institutions for which the arbitration boards and workmen's committees of the national auxiliary service law may serve as suitable models.

The central organizations of the federations of trade-unions and of salaried employees have therefore themselves undertaken the task of rewriting the bill of 1910 in a manner corresponding to the interests of the wageworkers represented by them. The accomplishment of this task was not easy, for the conceptions as to the scope of the bill already diverged on the main question as to whether the creation of labor boards or of workmen's chambers is to be demanded. The Christian and Hirsch-Duncker trade-unions were bound by the resolutions of their congresses to equipartisan representation of employers and workmen in the proposed boards, while the socialist free trade-unions (*Freie Gewerkschaften*) at their congress in Cologne in 1905 had voted with two-thirds majority in favor of workmen's chambers proper. As a bill for the creation of workmen's chambers proper had no prospects of enactment this last fact would not have prevented the Social-Democratic Party in the Reichstag from voting for a law creating labor boards, provided such a law would have given to the working classes suitable legal representation with sufficient authority and rights. At the present time the enactment of a bill giving legal representation to labor in the form of equipartisan boards seems possible, while a bill creating workmen's chambers proper would not even pass the Reichstag. This outlook caused the general commission of the free trade-unions in agreement with the other central organizations to formulate their bill in such a manner that it will suit the representatives of employers' interests while at the same time it safeguards the interests of the workmen and salaried employees. The bill recently submitted to the Reichstag contains 48 sections, based mainly on the bill of February 11, 1910, and on a later bill submitted by Representative Mumm on November 30, 1915, but containing several novel proposals. Owing to the length of the bill only its principal provisions can be given here.

The bill provides for the creation of labor boards for the safeguarding of the common industrial and economic interests of employers and workmen and of the special interests of workmen. It gives the boards a legal character. They are to be created for the district of one or several administrative authorities. Special workmen's divisions for the safeguarding of workmen's interests are to be formed in all labor boards and in their vocational sections. These divisions shall be composed only of representatives elected by the workmen.

The special tasks assigned to the labor boards and their sections are the following:

1. To promote mutually beneficial relations between employers and employees.

2. To aid the State and municipal authorities in the promotion of the economic and industrial interests of both employers and employees through the communication of facts and the rendering of opinions; to participate on request of these authorities in investigations of industrial and economic conditions in their district; to render, in particular, opinions as to the issuance of regulations in pursuance of articles 105b, paragraphs 2 and 3; 105d, 105e, paragraph 1; 120, 120e, 128, 139a, 139c to 139m; 154, paragraph 4, of the Industrial Code; article 62 of the Commercial Code, and of mining regulations having as their aim the protection of the lives, health, and morality of the workmen; further, to render opinions as to the local customs for the interpretation of contracts and the compliance with obligations between employers and employees.

3. To discuss demands and proposals which relate to employers' or employees' industrial or economic interests.

4. To set on foot institutions and measures which aim at the promotion of the general welfare of employees, and, on request of the representatives of such institutions, to participate in their administration.

5. To cooperate in the regulation of the system of mercantile and trade apprenticeship and vocational education and to cooperate in the school administration.

6. To promote the conclusion of collective and minimum-wage agreements through collection of material relating thereto.

7. To create trade boards for the home industries and to promote their activity through regulation of working and wage conditions.

8. To promote free employment exchanges.

9. To promote the procuring of employment for war invalids.

10. To appoint experts on request of the authorities.

The bill also authorizes the labor boards to undertake independently investigations as to the industrial and economic conditions in their

district and to give legal force to wage schedules fixed by the trade boards for home industries.

The divisions for workmen within the labor boards are assigned the following duties:

1. To discuss demands and proposals of the workmen and to prepare such proposals for discussion by the labor board or its sections.

2. To make investigations required therefor as to the amount of wages and their relation to the cost of living and as to hours of labor.

3. To render independently opinions if required and to make proposals to authorities, communal unions, and the legislatures of the Federal States and of the Empire.

According to the bill submitted by the trade-unions the labor boards are not to be founded on a vocational but a territorial basis; but they are to contain vocational sections, among them being those for agriculture and forestry, and for technical and mercantile salaried employees. Government and municipal works are included in the scheme.

This radical alteration of organization, in comparison with that of the older schemes, seems to be contemplated chiefly because it makes possible the incorporation in it of a conciliation board conceived on broad lines, which is desired under the trade-union scheme when the national auxiliary service law ceases to be in force. In this direction the following proposals are made in the bill under discussion: The compulsory formation of workmen's and salaried employees' committees is to remain in force and is extended to all establishments employing at least 20 workmen or salaried employees. The bill assigns to these committees essentially the same tasks as are assigned to the workmen's committees in the auxiliary service law. Should no agreement be arrived at in case of differences arising between the workmen's or salaried employees' committee and the management of an establishment, or should no such committee exist a conciliation board provided for in the bill intervenes. The chairman of this board, who may be neither an employer nor an employee, is to be appointed by the competent labor board. In addition to the chairman the conciliation board is to be composed of four permanent and two nonpermanent associates. The employers' and employees' representatives in the labor board each elect in separate meetings two of the permanent associates, while the nonpermanent associates (one employer and one employee) of the conciliation board are appointed by the chairman of the board. Such conciliation boards are to be created for the district of one or more administrative authorities. Decisions of the conciliation board may be appealed to an arbitration board to be created for the district of each chamber of labor. The chairman of the arbitration board may be neither an employer nor an employee, while the associate members of the board must be se-

lected in equal numbers from among employers and employees. Parties may be represented by counsel before the conciliation and arbitration boards. The conciliation courts, so far as they have existed in peace time, and the intervention of trustworthy private individuals are to be retained to the extent that the conciliation boards provided for in the present bill shall only be summoned to sit if neither side appeals to some other suitable authority.

Finally, the bill differs from the older proposals in yet another particular, viz, the question of expenditure; it desires the Empire to bear the costs of the labor boards, as indeed the Bundesrath is to fix the district in which labor boards are to be established.

Commenting on the scheme of the trade-unions the Soziale Praxis [1] says that—

> While this scheme does not agree with its own demands, it desires to abstain from criticism and only wishes to emphasize the fact that the scheme contains both the advantages and disadvantages of a compromise between organizations which held views in some measure widely divergent. The mere fact that all the organized workers of Germany are united on this platform will certainly enhance the prospect of realization of the demands put forward in the scheme.

PROPOSED DECENTRALIZATION AND STANDARDIZATION OF GERMAN INDUSTRY.

In the organ of the German Employers' Association,[2] Engineer Georg Siener discusses the question whether it would not be possible after the war to decentralize German industry more or less by removing factories from the cities to the country. "Decentralization" in this sense is eminently desirable to prevent overcrowding in large cities. Whether it is possible in any particular case depends on three factors—technical facilities (i. e., access to raw materials, to power, and to markets), labor, and lands. The cheapening of transportation and the erection of large central power stations will greatly increase the mobility of industry; and decentralization is favored by the modern tendency, especially in the iron and steel and machinery industry, to specialization and the production of standardized parts which can be carried on quite apart from the main factory. The difficulty of procuring labor in out-of-the-way places constitutes the chief obstacle to decentralization of industry; it can perhaps be partly overcome by offering the workman a plot of ground for growing vegetables, etc. On the other hand the cheapness of land in the country offers the greatest inducement to the manufacturer to remove his plant there; but care must be taken that this advantage is not lost through speculation in land. Finally, if decentralization is to be

[1] Soziale Praxis and Archiv für Volkswohlfahrt. Vol. 27, No. 10. Berlin, Dec. 6, 1917.
[2] Arbeitgeber-Zeitung, Dec. 30, 1917.

a success, it must be carried out on an organized plan under the supervision of public bodies dealing with large areas, not piecemeal by individuals. Good results, too, might be attained by laying out "industrial highways" alongside railways and canals.

The Welthandel[1] states that the Society of German Engineers in cooperation with a large number of industrial concerns is agitating for standardization of the machinery industry and of the iron and metal industry generally. This movement, the Welthandel predicts, will promote the development of German industries on fresh and improved lines.

Tools, threads, nuts, bolts, rivets, and other small fittings, having all the same dimensions, will be manufactured and employed everywhere. Every manufacturer, manager of a plant, or engineer has very often gone through the disagreeable experience of finding that threads were not the same, or that tools did not fit the existent mandrels, or that the dimensions of rivets, nuts, and bolts supplied by every manufacturer were of different sizes. For instance, the hexagonal nuts: Their width and depth vary with each manufacturer. If tools are considered, it is hard to find, for instance, two reamers or countersink drills of different makes having the same dimensions as regards their diameter, length, and slot to take up the drive. The difference in the conical end of reamers and countersink drills is very often so small that it can not be detected by the eye and is only noted at the time of fitting them in the chucks.

The "German Industrial Standards" are published in tables under the title "D. I. Norm," by the standard committee for the German industry. All the societies and unions of special trades, officials, and a large number of firms belonging to all kinds of industries are represented in this committee by their best experts. The draft of the "D. I. Norm" is based upon the opinions collected from forms which are sent to be filled in to as many industrial establishments as possible. These drafts are discussed and approved by the standard committee. The restrictions which are imposed on the industries by the "D. I. Norm" are kept for this reason within practical limits. It may be expected, therefore, that the use of the "D. I. Norm" will greatly facilitate the manufacture and purchase of products of all kinds in the industrial world.

DEMOBILIZATION IN AUSTRIA AFTER THE WAR.

[2]The Bremer Bürger-Zeitung[2] calls attention to an article by the well-known trade-union writer, Julius Deutsch, of Vienna, in the Austrian labor periodical, "Der Kampf," in which he points out a

[1] Der Welthandel, Dec. 14, 1917. [2] Bremer Bürger-Zeitung. Bremen, Nov. 16, 1917.

difference in the attitude of the German and Austrian trade-unions toward demobilization. Both are agreed that after peace is concluded no worker should be kept in the army longer than is absolutely necessary on military grounds; but in regard to the exact process of demobilization they differ. The Austrian trade-unions demand discharges according to age, preference to be given only in exceptional cases to specially important groups of workers; while the German trade-unions insist that the first consideration should be given to particular callings and particular groups of workmen. The motive which weighs with them is the desire to bring about the economic revival as quickly as possible. With regard to the problem of work for the discharged soldiers, Deutsch says that the Social-Democratic policy is not to keep them in barracks till they have found some means of supporting themselves, but to enable them, by Government assistance, to resume their duties as citizens. The ways in which the Government can assist are by cheapening the cost of living, supporting the unemployed, continuing military pay for one month after discharge, granting sick leave, and, where necessary, expenses of a stay in a health resort, establishing employment offices with equal representation for employers and employed, granting free transportation to places of employment away from home, protecting soldiers' families against creditors (prolonging period of payment and prohibiting too hasty sale of pledges), and, lastly, by resuming social reforms and provision for housing.

LABOR CONDITIONS IN INDUSTRIAL AND COMMERCIAL ESTABLISHMENTS IN FRANCE, JULY, 1917.[1]

A summary of the reports relative to the supply of labor in industrial and commercial establishments in France at various dates from August, 1914, to January, 1917, was published in the MONTHLY REVIEW for August, 1917. The data upon which the reports have been based were collected by the labor inspection service, and cover only such establishments as were able to furnish comparable data for the entire period under investigation. For this reason the number of establishments varies in the different investigations.

The ninth investigation relative to labor conditions was made in July, 1917. The figures cover only such establishments as are subject to inspection laws; consequently mines and quarries, railroads and tramways, and establishments under the supervision of the minister of war and the minister of marine are not included. It is reasonable to suppose that if these were considered, the number of persons employed in industry and commerce would show a much greater per

[1] France. Bulletin du Ministère du Travail et de la Prévoyance Sociale Nos. 10-12, October to December, 1917. Paris.

cent of increase than is shown in the tables prepared by the labor office. There has been an especial increase in the number of employees in establishments engaged in work for national defense These are not subject to inspection by agents other than those of the departments of Government for which they are being operated.

The number of establishments for which data were reported in July, 1917, was 52,278, which before the War furnished employment to 1,524,959 persons. The data given in the following tables refer only to these establishments and are entirely independent of any data reported at any of the preceding investigations.

The figures shown are not to be taken as indicating in any manner the extent of unemployment, but rather the business situation in the industries considered. The decreases in employment shown in most of the industrial groups do not mean that the workmen leaving them were necessarily unemployed. An average of 24 per cent was mobilized and many others who were unable to find employment in their usual occupations have accepted employment in industries which have not suffered from the war, or in which the demand for employment has increased, as in the chemical and metallurgical groups, in which, while the number of establishments in operation has decreased, the number of employees is largely in excess of the number employed before mobilization.

The investigation shows a gradual movement since July, 1915, toward recovery in every industrial group, both in the number of establishments in operation and the number of persons employed.

NUMBER OF ESTABLISHMENTS FURNISHING DATA RELATIVE TO INDUSTRIAL CONDITIONS PREVAILING DURING THE WAR AND NUMBER AND PER CENT IN OPERATION AT SPECIFIED DATES.

[From Bulletin du Ministère du Travail et de la Prévoyance Sociale, October to December, 1917, p. 434.]

Industrial group.	Number of establishments reporting.	Establishments in operation in—				Per cent of establishments in operation in—			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.	August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation	4,222	3,094	3,655	3,852	3,908	73	87	91	93
Chemical	1,583	894	1,243	1,357	1,410	56	79	86	89
Rubber, paper, cardboard	786	351	642	697	724	45	82	89	92
Printing and binding	1,312	652	952	1,022	1,103	50	73	78	84
Textiles	3,605	1,124	2,681	2,951	3,135	31	74	82	87
Clothing, millinery, etc	10,817	5,187	6,963	8,013	8,211	48	64	74	76
Leather and hides	3,151	1,217	1,768	1,948	2,023	39	56	62	64
Woodworking	5,142	1,622	2,751	3,401	3,706	32	53	66	72
Metallurgy (base)	7,908	3,160	5,273	5,969	6,436	40	67	75	81
Metallurgy (fine)	562	57	388	407	497	10	69	72	88
Precious stones	98	7	41	54	52	7	42	55	53
Building trades, etc	2,930	785	1,134	1,354	1,479	27	39	46	50
Porcelain, pottery, glass, etc	1,258	363	682	791	884	29	54	63	70
Storage and transportation	469	291	354	405	416	62	75	86	89
Commerce	8,435	4,973	5,411	5,988	6,320	59	64	71	75
Total	52,278	23,777	33,938	38,209	40,304	45	65	73	77

NUMBER OF PERSONS EMPLOYED IN ESTABLISHMENTS FURNISHING DATA RELATIVE TO INDUSTRIAL CONDITIONS PREVAILING DURING THE WAR AND NUMBER AND PER CENT AT WORK AT SPECIFIED DATES.

[From Bulletin du Ministère du Travail et de la Prévoyance Sociale, October to December, 1917, p. 435. The number of employees at work, as shown by this table, does not include mobilized workers.]

Industrial group.	Number of employees before the War.	Number of employees at work in—				Per cent at work in—			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.	August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation	93,775	50,469	73,406	80,671	80,577	54	78	86	86
Chemical	78,892	35,470	66,228	84,070	93,667	45	84	107	119
Rubber, paper, cardboard	55,298	17,606	33,467	40,040	42,508	32	61	72	77
Printing and binding	38,114	13,198	18,509	20,845	21,397	35	49	55	56
Textiles	309,287	104,698	220,090	246,642	255,227	34	71	80	83
Clothing, millinery, etc	137,764	44,332	87,222	104,743	109,743	32	63	76	80
Leather and hides	70,212	26,864	48,097	55,999	59,375	38	68	80	85
Woodworking	84,790	19,315	43,161	61,905	72,581	23	51	73	86
Metallurgy (base)	371,300	122,356	321,041	514,318	642,539	33	87	139	173
Metallurgy (fine)	8,037	1,050	3,586	4,473	4,861	13	45	56	60
Precious stones	2,842	543	1,196	1,410	1,517	19	42	50	53
Building trades, etc	72,351	11,502	24,042	32,430	36,609	16	33	45	51
Porcelain, pottery, glass, etc	81,227	16,494	32,386	41,735	45,258	20	40	42	56
Storage and transportation	39,162	14,548	22,314	28,933	28,127	48	74	96	93
Commerce	90,908	40,284	53,029	62,652	65,407	44	58	69	72
Total	[1]1,524,959	518,729	1,050,774	1,380,866	1,559,393	34	69	91	102

[1] This total is not the correct sum of the items; the figures are given as they appear in the source shown above.

In July, 1917, 77 per cent of the establishments reporting for the entire war period were in operation, and employed 102 per cent of the number of persons employed before the War in these establishments. If to this 102 per cent employed be added the 24 per cent withdrawn by mobilization, the number of active and potential employees in July, 1917, exceeded the number before the War by 26 per cent. The source of this increase is discussed in the MONTHLY REVIEW for August, 1917.

The following table shows (1) the estimated proportion of industrial workers mobilized for military duty when the War began, and (2) the per cent of increase or decrease in the number of employees in specified months, 1914 to 1917, in establishments investigated as compared with the normal number of employees before the War. In this table both active and mobilized workers are considered as employees. That is to say, in computing the percentages of increase or decrease the decrease due to mobilization of workers is not taken into consideration.

PER CENT OF INCREASE OR DECREASE IN NUMBERS EMPLOYED IN SPECIFIED INDUSTRIAL GROUPS AT SPECIFIED PERIODS AS COMPARED WITH NORMAL NUMBERS EMPLOYED BEFORE THE WAR.

[In this table mobilized workers are not deducted in computing the per cent of increase or decrease as compared with normal.]

Industrial group.	Per cent of employees withdrawn by mobilization.	Per cent of increase (+) or decrease (−) as compared with normal number before the War.			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation	26	−20	+ 4	+12	+ 12
Chemical	27	−28	+11	+34	+ 46
Rubber, paper, cardboard	19	−49	−20	− 9	− 4
Printing and binding	24	−41	−27	−21	− 20
Textiles	15	−51	−14	− 5	− 2
Clothing, millinery, etc.	6	−62	−31	−18	− 14
Leather and hides	26	−36	− 6	+ 6	+ 11
Woodworking	30	−47	+19	+ 3	+ 16
Metallurgy (base)	32	−35	−19	+71	+105
Metallurgy (fine), and precious stones	23	−62	−33	−23	− 8
Building trades, etc.	33	−51	−34	−22	− 16
Porcelain, pottery, glass, etc.	28	−52	−32	−30	− 16
Storage and transportation	32	−20	+ 6	+28	+ 25
Commerce	25	−31	−17	− 6	− 3
Total	24	−42	− 7	+15	23

LABOR REGULATIONS FOR FACTORIES IN SWITZERLAND.[1]

The Federal Council, by ordinance, effective November 15, 1917, enacted the following factory regulations to be observed in applying the Federal neutrality law of August, 1914.

Hours of labor in factories shall not exceed 10 per day. On Saturdays and the days next preceding holidays 9½ hours shall constitute a day's work. When the hours of labor on Saturdays do not exceed 6½ and labor ends at 1 o'clock p. m., the hours on other days may extend to 10½.

A rest period of one hour near midday is mandatory, unless the day's work ends at 2 o'clock p. m. and a half-hour rest period is granted, or the hours of labor do not exceed 9 with a like rest period granted, or unless the day's work does not exceed 6½ hours and a rest period of 15 minutes is granted.

In establishments employing but one shift the rest periods shall not be deducted unless they are regularly and simultaneously granted to all employees, and during that time they are permitted to leave their working places.

From May 1 to September 15 labor shall be performed between the hours of 5 a. m. and 8 p. m., and for the rest of the year between 6 a. m. and 8 p. m. On Saturdays work shall stop at 5 p. m.

A schedule of hours of work shall be filed with local authorities.

Permits may be granted: To arrange rest periods by turns; to extend hours of labor 2 hours for not more than 25 days a year

[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale. Nos. 10-12, October to December, 1917, Paris.

(exceptionally the number may be further increased when the permit applies to a small portion only of the employees, or a portion of the factory); permitting night work 30 nights per year, except 1 night between Saturday afternoon and Monday morning, and provided that not more than 10 hours' work is required during the 24, broken by a rest period of at least one-half hour; and to work 12 Sundays, at the most, per year.

The department of political economy may extend these permits when important reasons, especially for national defense, or to increase the food supply, warrant such action.

Notice that these permits have been granted must be filed with the cantonal authorities and with the proper labor inspectors.

When overtime, night, or Sunday work is permitted the employer is required to pay the employees so engaged time and a quarter. Extra pay in piecework shall be based on average earnings. If working at a fixed rate that shall be the basis.

No other method of payment for overtime work is permitted. All permits shall specify this rate and be posted in the factory.

PROVISION FOR DISABLED SOLDIERS AND CIVILIANS.

PROPOSED VOCATIONAL REHABILITATION ACT.

A bill to provide for the vocational rehabilitation and return to civil employment of disabled soldiers and sailors discharged from our military and naval forces was introduced in the Senate of the United States on April 8, 1918.

The new bill places entire responsibility for the vocational reeducation and placement of disabled members of the forces with the Federal Board for Vocational Education and provides that every person who is disabled under circumstances entitling him, after discharge from the military or naval forces, to compensation under Article III of the War Risk Insurance Act, as amended, and who in the opinion of the Federal Board for Vocational Education is unable to resume his former occupation or to enter some other suitable occupation, and who may be vocationally rehabilitated, shall either be ordered by the Bureau of War Risk Insurance to follow such course of vocational rehabilitation as the Federal Board for Vocational Education shall provide, or shall be retained in the forces and detailed to the control of the Federal board until such course of training has been satisfactorily completed. Every person so designated shall receive as monthly compensation a sum equal to the amount of his pay for the last month of active service, or to the amount to which he would be entitled under the War Risk Insurance Act, in the same manner as if he were an enlisted man. Failure to follow the prescribed course of training will result in the withholding by the Bureau of War Risk Insurance, in its discretion, of all or any part of the monthly compensation due him.

The bill proposes to give the Federal Board for Vocational Education power to provide such facilities, instructors, and courses of vocational rehabilitation as it deems necessary for the proper training of persons concerned, power to provide for the placement of rehabilitated persons, and to use in its placement work, with the approval of the Secretary of Labor, the facilities of the Department of Labor, in so far as it may be practicable. The Federal board is also authorized to make studies, investigations, and reports regarding the vocational rehabilitation of disabled persons and their placement in suitable occupations,and to cooperate with such other public or private agencies as it may deem advisable in the performance of the duties imposed upon it by the proposed act.

Section 5 of the bill provides that all medical and surgical work and other treatment necessary to give functional and mental restoration to disabled persons prior to their discharge shall be under the control of the War and Navy Departments; and for cooperation between these departments and the Federal board to insure a proper process of prevocational and vocational training.

The proposed act, if passed, will repeal section 304 of the War Risk Insurance Act, as amended, which embodies the only provision which has as yet been made for this important work. This section apparently places the work of rehabilitation within the jurisdiction of the Bureau of War Risk Insurance, and is a promise of what should be done, rather than a workable program. It makes no appropriation for carrying on the work. Section 304 reads:

> In cases of dismemberment, of injuries to sight or hearing, and of other injuries commonly causing permanent disability, the injured person shall follow such course or courses of rehabilitation, reeducation, and vocational training as the United States may provide or procure to be provided. Should such course prevent the injured person from following a substantially gainful occupation while taking same, a form of enlistment may be required which shall bring the injured person into the military or naval service. Such enlistment shall entitle the person to full pay as during the last month of his active service, and his family to family allowances and allotments as hereinbefore provided in lieu of all other compensation for the time being.
>
> In case of his willful failure properly to follow such course or so to enlist, payment of compensation shall be suspended until such willful failure ceases and no compensation shall be payable for the intervening period.

The Congressional Record for April 8, 1918, which reprints the bill and memoranda submitted in connection with it, includes the following paragraph:

> Section 304 is buried in an act, every one of whose other important sections deals with war-risk insurance. Admittedly it was inserted as a promise by Congress that the rehabilitation, reeducation, and vocational training of injured sailors and soldiers would be more definitely provided for at the ensuing session. Naturally, under these circumstances, this very difficult and highly specialized work is committed, under the general terms of the act, to an organization and administration which, while admirably adapted for war-risk insurance—for which it was primarily intended—is inadequate, so far as section 304 is concerned, for the proper care, education, and placement in industry of injured men.

The practicability of such economic adjustment as is proposed in this bill has already been established by the other belligerent countries, who have already in operation carefully worked-out organizations which carry on the work of rehabilitating the disabled victims of the War, and which have accomplished remarkable results. In England the authority for carrying on this work is centralized under the Minister of Pensions, a cabinet office which has been created since the beginning of the War. In France the vocational reeducation and employment of disabled members of the forces is under the super-

vision of the Minister of Labor. In Canada a new department, known as the Department of Soldiers and Sailors Civil Reestablishment, has recently been created to supervise the vocational and employment work of that country. The experience of all of these countries has been that a centralization of governmental authority in this matter is essential, whether vested in a department created for the purpose or in an existing agency suitably equipped.

NEW FRENCH LAW RELATING TO THE REHABILITATION OF DISABLED SOLDIERS.

A French law, adopted January 2, 1918,[1] places the vocational reeeducation and employment of disabled soldiers in France under the supervision of the Minister of Labor and makes some changes in the organization and work of the national office of disabled and retired soldiers. The decree of February 26, 1918,[2] determines some of the measures necessary to the application of this law. A complete translation of the law and extracts from the decree applying it are here reprinted:

ARTICLE 1. Every soldier or former soldier of the military and naval forces suffering from infirmities resulting from wounds received, or from sickness contracted or aggravated during the present war may request his inclusion in a school for vocational reeducation for the purpose of readjusting himself to industry with particular reference to his occupational training and employment.

The request may be addressed either to a school for reeducation; to a prefect of the "Departement" in which the applicant formerly resided; to a departmental committee of wounded and retired soldiers of that "Departement;" or to the national office of wounded and retired soldiers.

Persons under treatment, or whose retirement is being considered, should make their requests to the chief physician of the health office (*Formation Sanitaire*) in which they are under treatment.

ART. 2. The national office of wounded and retired soldiers, which is declared a public establishment, under the supervision of the Minister of Labor, constitutes an organ of cooperation between public offices and private associations or enterprises concerned with the soldiers mentioned in article 1. Its functions are: To collect and collate information concerning the aims of these offices, associations, or enterprises; to encourage and assist in the readaptation of such persons to industry; to investigate legislative provisions and regulations which may be adopted in their favor and to follow the application of it, and in a general way to assure the support and permanent assistance recognized by the nation to be justly due them.

ART. 3. The resources of the national office of wounded and retired soldiers include:

1. The annual credit carried in the budget of the Minister of Labor and Social Welfare, in the special division entitled "National Office for Wounded and Retired

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[1] Loi concernant la rééducation professionnelle et l'Office National des Mutilés et Réformés de la Guerre. Published in the Journal Officiel de la République Française for Jan. 3, 1918, pp. 99, 100. Paris.

[2] Un décret rendu en conseil des ministres déterminant les mesures d'exécution nécessaires à l'application de la loi concernant la rééducation professionnelle et l'Office National des Mutilés et Réformés de la Guerre. Feb. 26, 1918. Published in the Journal Officiel de la République Française, Feb. 28, 1918, pp. 1992–1995.

Soldiers," and other subventions which may be appropriated by the State, the departments, and the communes.

2. Gifts, legacies, and donations of any nature or origin which may be made either directly to the office, whether to the whole body of soldiers or former soldiers named in article 1, or to a definite class of them. Provided that when such gifts, legacies, or donations are made for the wounded and retired soldiers of a definite district, they shall be distributed by decree, issued upon the advice of the national office, between the departmental committees and localities interested.

3. All other resources which may by law accrue to the national office.

ART. 4. In case the national office or any departmental office is abolished, the funds resulting from gifts, legacies, or donations made to the office or committee shall be placed by decree of the Council of State, with the approval of the Minister of Labor, to the credit of public establishments or of recognized public utilities capable of fulfilling the wishes of the donors.

ART. 5. In each "Departement" there shall be created, upon the agreement of the general council and the national office, by decree which shall determine the extent of their territorial jurisdiction and specify the number of their members, departmental or local, wounded and retired soldiers' committees.

These committees may receive State, departmental, or communal subventions, gifts, and legacies, subject to the conditions prescribed by the civil code for the establishment of public utilities.

They shall not acquire any other real estate except that necessary for their meetings, or for the conduct of the business provided for in article 1..

ART. 6. The council of ministers shall determine by decree the methods necessary for the execution and application of this law, and especially:

1. The organization of the national office for wounded and retired soldiers, and the departmental committees provided for in article 5, as well as the conditions under which the private associations or enterprises shall be represented in the said bodies;

2. The conditions under which State aid may be granted to departmental committees and institutions for reeducation after consultation with the national office (commission of reeducation), as well as the control and supervision of the use of such subventions;

3. The proofs necessary to be furnished the departmental committees by the soldiers mentioned in article 1 in order to become beneficiaries under the provisions of paragraph 1 of article 7.

ART. 7. During the period of occupational reeducation of a soldier whose pension has not been liquidated, his family shall continue to receive the military allowance. If his pension is liquidated and if the twelfth of that amount is less than the amount of the monthly allowance to the family, the difference shall be paid until the completion of the period of reeducation.

The departmental committee shall determine the duration of the period of occupational reeducation during which the family of the soldier may be paid the benefit provided for in the paragraph above. Appeal from this decision can be made to the national office by the soldier involved within one month after his notification of it.

ART. 8. In no case shall the pension be reduced because of the fact of occupational reeducation and readaptation to work.

ART. 9. The minister of labor shall make an annual report to the President of the Republic showing the operations of the national office, the results of occupational reeducation and employment secured for the persons mentioned in article 7, and relative to the distribution of State subventions.

EXTRACTS FROM THE DECREE OF FEBRUARY 26, 1918, APPLYING IN ABOVE LAW.

CHAPTER I. NATIONAL OFFICE OF DISABLED AND RETIRED SOLDIERS.

ARTICLE 1. The national office of disabled and retired soldiers, under supervision of the minister of labor and social welfare shall be composed of 60 members of French nationality, appointed for three years, by decree, upon the nomination of the Minister of Labor, namely:

5 senators.
10 deputies.
3 representatives of the minister of labor.
3 representatives of the minister of war, of whom one shall represent the military health service.
2 representatives of the minister of the interior.
2 representatives of the minister of commerce.
2 representatives of the minister of agriculture.
2 representatives of the minister of the navy, of whom one shall represent the health service.
1 representative of the minister of finance.
1 representative of the minister of public instruction.
1 representative of the minister of the colonies.
2 members, one an employer, the other a workman, of the superior labor council.
1 member of the superior council of mutual aid societies.
1 member of the superior council of technical instruction.
1 member of the superior council of agriculture.
1 member of the Paris chamber of commerce.
1 member of the superior council of public assistance.
1 surgeon and one physician from the hospitals.
3 directors of the schools of professional reeducation.
6 members of associations of the wounded or disabled.
6 persons chosen from associations or private institutions concerned with the care of wounded or retired soldiers.
4 persons known by reason of their special ability, their work, or their services.

* * * * * * *

The president of the national office shall be assisted by three vice presidents appointed by the minister of labor from among the members of the national office.

ART. 2. The national office shall include three branches, the organization of which shall be fixed by an order of the minister of labor: (1) an executive committee, (2) a commission of reeducation, and (3) an advisory council (*conseil de perfectionnement*). A member may serve in more than one of these branches.

The executive committee shall establish the plan for the official budget and financial statements; shall prepare decisions relative to the acceptance of gifts and legacies; shall have charge of the reports of departmental and local committees in matters with which the executive committee is concerned, whether concerning the constitution and administration of those committees, or placement; shall keep a register of the disabled, giving useful information which will facilitate their reeducation and employment, and giving information concerning the general assistance which they may need; shall gather definite information regarding occupations open to the disabled according to the nature of the disability, the needs of each industry and of each locality, the placements made, and the offers and demands for work which can not be met by local organizations; shall give advice concerning the distribution of occupations reserved for disabled and retired soldiers, according to the law of April 17, 1916; in a general manner, shall include in its functions all that concerns the administrative and financial working of the national office, all that concerns the working of the de-

partmental and local committees, and questions within the jurisdiction of the ministry of labor, especially that of placement.

The commission of reeducation shall give advice upon the demands for State aid made by institutions or associations which are concerned with professional reeducation; shall assemble documents relating to equipment, methods, and the general organization of reeducation; shall secure reports relative to attendance at the schools and results obtained; shall examine appeals made against the decisions of departmental committees relative to reeducation and in a general manner include in its functions all questions concerning vocational reeducation and the administrative working, financial or technical, of centers and schools of vocational reeducation.

The advisory council (*conseil de perfectionnement*) shall include in its functions all questions concerning the general interests, material and moral, of disabled soldiers, keeping in touch with all kinds of institutions (except those concerned with vocational reeducation) whose purpose is to lend assistance to soldiers or former soldiers named in article 1 of the law.

It shall secure all documents relating to institutions which aid the disabled, as well as information regarding the help afforded them.

ART. 3. The full assembly of the members of the national office shall examine the matters referred to it, either by the minister or by the divisions specified in article 2. It shall decide particularly upon the appeal made against the decisions of the departmental or local committee by the application of article 7 of the law of January 2, 1918, and upon the acceptance or refusal of gifts or legacies which are made to the office.

Its decisions shall become operative if within 20 days from the close of the session the minister of labor does not ask their annulment on the ground of excess of power or violation of legislative or regulative order. In case of urgency the minister may sign a resolution for immediate execution.

If after two months, annulment has not been confirmed by a decree rendered in the council of State, the decision shall become executory.

ART. 5. The full assembly of the national office shall meet at least once in six months and at any other time the needs of the service require a meeting, or upon request of the executive committee.

Within 8 days after the meeting a copy of the proceedings shall be sent to the minister of labor.

ART. 6. Every hospital, school of reeducation, or other institution (with the exception of field hospitals, or hospitals behind the lines designated by the military health service), which in any way gives aid to soldiers or former soldiers who, because of injuries or infirmities contracted during the war, have become incapable of remunerative work, or whose capacity for work is greatly diminished, shall be required to send to the departmental committee of the department in which the institution is located a statement accompanied by a medical record card, the form for which has been established by agreement between the minister of labor and the military health service. These documents shall be transmitted to the national office by the committee within a month at most.

ART. 7. The administrative service of the national office shall be divided into three sections corresponding to the three special divisions specified in article 2.

The heads of the sections shall have a consulting voice in the full assembly, where they perform the duties of secretaries, one of them acting as general secretary of the national office. They shall be responsible to the chairman of the executive committee, who can delegate his powers either to another member of the committee or to the general secretary.

Chapter II. Departmental or Local Committees of the Disabled and Retired of the War.

Article 16. The departmental committee shall have its headquarters at the largest city of the Department. It shall be composed, with the prefect as chairman, of members named by the prefect with the approval of the minister of labor, the general council of the department, and of the national office (executive committee). Members of the local committee shall be selected in the same way.

The departmental or local committee may appoint qualified persons to visit the wounded in hospitals to give advice which wounded men may need and assist them in their readjustment to industry.

A daily list of these persons shall be made and sent to the national office.

Art. 17. Employment service for the disabled and retired shall be assured by the public employment offices which, in cooperation with the departmental or local committees, shall adopt measures expedient for this purpose.

Public employment offices shall make known to the departmental committees the results of the work of placing the disabled and retired. In the executive committee of each departmental employment office the departmental committee for disabled and retired soldiers shall be represented by at least one member and not more than three.

Art. 18. The departmental or local committee shall watch over the interests of the disabled soldiers, except in the case of special institutions for the assistance of the tubercular, in all cases in which the disabled men need aid, including apprenticeship and employment.

It shall endeavor to create centers or schools of reeducation in the departments which are unprovided, or insufficiently provided, with them.

As soon as it is known that a disabled soldier, capable of reeducation, is in a hospital of a Department the committee shall have him visited by an advisor, who will aid him in choosing a vocation, with due consideration to his probable invalidity and the nature of his former vocation, as well as to the opportunities for work which are offered in the department in which he lived before the war and persuade him to enter upon a course of reeducation as soon as possible.

The school shall be designated by the president of the commission of reeducation of the national office, taking into consideration the places available and the region to which the wounded man belonged before the war.

Art. 19. The departmental or local committee shall meet at least once in three months and whenever it is called by the president.

Art. 23. The assembly of the departmental committee or of the local committee shall give advice upon:

1. Regulations relative to the appointment of an efficient force and the management, promotion, and discipline of the administrative personnel.

2. The acceptance or refusal of gifts and legacies which may be referred to it under the conditions prescribed by article 910 of the civil code.

3. All questions relating to disabled or retired soldiers which are submitted to it by the minister of the national office or the prefect.

Art. 24. Appeals may be made against the decisions of the departmental or local committee by a person or a group of persons concerned. These appeals shall be addressed to the minister of labor, who shall transmit them at once to the executive committee of the national office, and notify the chairman of the departmental committee and the chairman of the local committee advising them that they have a month from the date of notification in which to reply.

At the expiration of the time indicated the prefect shall transmit the papers of appeal to the minister of labor, with his report, for examination by the national office.

The executive committee of the national office shall decide from this memorandum upon the decisions which should be made.

ART. 26. The national office shall be advised, in a form which will be fixed by ministerial order, of all placements made, of all relief accorded by departmental or local committees.

CHAPTER III. STATE SUBSIDIES.

ART. 38. State grants allowed to departmental committees, whether for their own working or for that of local committee, shall be determined by the minister of labor upon the advice of the national office (executive committee). State grants allowed to establishments for professional reeducation of the disabled and retired shall be determined by the minister charged with the management of the divisions of the budget relative to those grants, upon the advice of the national office (commission of reeducation).

CHAPTER IV. REQUIREMENTS FOR ADMISSION.

ARTICLE 41. Soldiers or former soldiers mentioned in article 1 of the law of January 2, 1918, who desire to be admitted to the advantages specified in paragraph 1 of article 7 of the said law shall make their request by letter, addressed either to a school of reeducation, or to the prefect of the Department in which the wounded man resided before the War, or to the departmental committee of that department, or to the national office. This request may be sent by the man interested to the mayor of the commune where he is staying, who will transmit it to the national office.

Soldiers in course of treatment or about to be retired shall address their request to the military authority.

The request shall make known:

1. The name, given name, and address of the man;
2. The place (commune and Department) of his residence before the War;
3. His military position;
4. The nature of his disability and the cause of his wound;
5. His former vocation;
6. The vocation in which he wishes to be reeducated;
7. The establishments for reeducation to which he has been previously admitted, or the declaration that he has been in none;
8. The region in which he wishes to locate after reeducation;
9. The allowances which he, or members of his family, have been receiving.

ART. 42. Upon the admission of a disabled man to a school the director shall notify the national office and the prefect of the Department in which the man lives. The prefect in his turn shall advise the departmental committee and the mayor of his home commune as to the day on which the man began his reeducation.

Upon the conclusion of the period fixed for reeducation, or upon the departure for any reasons whatever, of the disabled man from the place of reeducation, the director of the school shall immediately advise the national office and the prefect interested, of his departure, who in turn shall advise the mayor of the man's home commune and the departmental committee.

FRENCH EXPERIENCE IN THE PLACEMENT OF DISABLED SOLDIERS.

One section of the interallied conference for the study of questions concerning war invalids, which was held at Paris in May, 1917, was devoted to the discussion of the problem of employment of disabled

men.[1] A summary of the opinions of certain French specialists present at the conference, on the subject of placement of such men in commerce and industry, is printed below:

I. Is it well to keep disabled men so far as possible in their former vocations?

There is evidently every advantage from both the technical and the psychological point of view in placing a disabled man in his former calling or at least in an industry which is related to it, even though in order to readapt himself he finds it necessary to go through a school of reeducation. Every injured workman should be advised before choosing another calling to consider under what conditions he could continue his former trade, and if this seems possible, every facility should be given him to make an attempt for two or three months at readapting himself to it, with all the aid which can be afforded him by means of prosthesis, tools, and experience. If he (especially a man with his upper limbs crippled) is persuaded that by the help of physical means he can do this, the results will be better in the trade which he knows and which he has acquired through several years of practice, habit, and experience, since each profession, each trade has a special technique, its own manners, its usages, its traditions, and its particular character which it stamps upon the worker. According to an inspector of labor, disabled men employed in a new calling on account of their infirmity become easily discouraged, and cases are not infrequent in which such men give up their work entirely.

II. Should disabled men remain in the region in which they were living before the war?

Of course the choice of residence is subordinated to the exercise of their calling. They can not return to the parts of the country from which they came unless they are sure of finding work there by which they can make their living. Rural exodus is not favored. It is indispensable that the greatest possible number of injured farmers be influenced to return to the land. A large number of wounded can be of great service to agriculture and there is not the slightest doubt of the need for agricultural workmen. It is considered advisable to train those formerly on the land and unable to return to it in some skilled trade which can be pursued in the country. It is hoped that all efforts, both in the line of vocational reeducation and of employment, will be directed toward the returning of disabled soldiers to the regions in which they originally lived.

III. Is it well to create special shops for invalids?

Special shops are necessary for invalids in whom the degree of disability makes certain equipment and tools of a special nature necessary, for example, for the blind. There is no reason why

[1] Conférence interalliée pour l'étude de la rééducation professionnelle et des questions qui intéressent les invalides de la guerre du 8 au 12 Mai, 1917. Paris, 1917. pp. 239-269.

invalids whose disabilities do not demand special equipment should be separated from their comrades and isolated in special shops, which would very soon be considered "charity" shops. Invalids employed in such shops would soon form a special category of workmen hostile to the other workmen in their occupation; and, too, the disabled gain a certain amount of inspiration from association with their normal comrades and become less sensitive to their physical inferiority.

IV. Should it be admitted as a principle that the disabled ought to receive for equal production a salary equal to that of the normal workman?

Unless some equable arrangement be made, there is the risk that upon demobilization the uninjured soldier will find himself opposed in his prewar occupation by his disabled comrade. All of the employers from whom the labor office has received reports on the employment of war invalids have spontaneously declared that reeducated or readapted disabled men will be employed under normal conditions and that the work which they do, whether at home or in the shop, will be paid for at the same rate as that done by normal workmen. All employers and others interested in the employment of the disabled are not in accord on this point. However, there seems to be no objection to the formula "Equal production, equal pay."

The principle of equal wages being admitted, it is always necessary to establish a distinction in its application to different methods of executing the work. For piecework the rule can be inflexible as its application is simple. For work by the day the minimum salary should be equal for the disabled and the normal workman. If the production of the disabled worker is less than that of the normal workman, it is suggested that this situation be relieved by reducing the working day for the disabled by one, two, or three hours, as the exigencies of the case demand. In some cases the disabled might work half a day and the day be filled by two such men working alternately. This, of course, involves the question of special cases.

As to the comparative earning capacity of the disabled and normal workman, authorities seem to disagree. By some it is stated that disabled workmen should be able to earn as much as normal men, for the occupations in which they are engaged should be such that these men could fill them as well as normal workers; that whenever the vocations of the disabled men are adapted to their possibilities, the output is about the same as that of normal workmen doing the same work. Other authorities have estimated that for woodwork the production of the disabled man is a little more than 80 per cent of that of the normal workman. This valuation is also found in the report of an inspector of labor, who says that "a metal establishment of Billancourt employed 10 disabled men, of whom 5

had crippled legs, 2 were blind in one eye, and 2 had projectiles in the thorax which had not been extracted." He estimated that the production of these workmen is 80 per cent of that of the normal specialists in each class.

One inspector of labor reports an important factory in Paris which employs an almost equal number of normal and disabled workmen (more than 200 of each class). Those with crippled legs work sitting, are engaged as stampers, measurers, turners of sheaths, and polishers. In this factory the number of processes has to be increased on account of their employment, for it is necessary to carry their work to and from them. This inspector further states that the inferior production of the disabled man may be quite variable, but it is in general incontestable and that in order to lessen it in a measure, and to reach the limit of possible output, it will be necessary to permit the reduction of the day and choice of work.

Another inspector says, "The length of the day need not be changed on account of the employment of disabled men if such men are given work suitable for their physical condition. It is indispensable to give disabled men work which is compatible with their strength and ability."

V. Ought special organizations to be created for the employment of the disabled or ought they to be placed through the ordinary public employment offices?

An investigation of the subject was made by the French departments concerned, with the result that the public employment offices already established have been expressly charged with the placement of the wounded. It was believed that the question of employment for this class of workers was the same as for normal workers and that special institutions created for the purpose would create a danger that these workers would not be employed under normal conditions of remuneration.

The fact that they enjoy military pensions might influence the disabled to accept places at a scale of wages inferior to that of normal workmen. There would arise the possibility of conflicts between the normal workers and the injured ones, whom the former might accuse of underbidding them. Besides this, offices created especially for the disabled or wounded would have a tendency to concentrate these workmen in a small number of vocations and establishments.

It is not to be expected that an employer would always apply to special placement offices from pure philanthropy. On the contrary, there is danger that employers who apply to these special placement offices would only do so with the idea of finding cheap labor.

The conclusion which has been drawn by all concerned with placing wounded soldiers is that it is best not to separate their placement from that of the general workers, and that both classes of workmen

should be placed through the public employment service. It is there that employers who are looking for them will find them under the best material and moral conditions. It is there that employers who do not intend to employ wounded soldiers and who do not think themselves able to employ them may yet be influenced to employ them, perhaps by persuasive methods or perhaps by failure to find other labor.

For the duration of the War the private offices concerned exclusively with the employment of the disabled, such as those established by associations of employers and by the trades-unions have a useful function and it is not considered expedient to abolish them. Reeducation schools are placing the disabled who have been reeducated. It is foreseen, however, that most of these institutions will survive only a short time after the War, and they do not now reach a large number of invalided men who have not undergone vocational reeducation. This class of the disabled have recourse to the offices which have already taken charge of placing ordinary workmen.

VI. Rules to be observed in placing wounded soldiers.

All departmental or municipal employment offices are under the control of a commission composed of employers and workmen chosen from among the principal trades expected to have recourse to their placement services.

Public employment offices have been instituted in all parts of the country for placing normal workmen and the conditions under which they function are determined by general rules, the application of which presents a minimum of guarantees sufficient for those involved. For the placing of invalids it would be necessary to make these guarantees more exact and complete. (1) Some one in authority in each office should thoroughly familiarize himself with the requirements of the work and take necessary steps to learn the exact conditions under which the wounded men will work and the salaries which they will receive. These should, if possible, be stipulated by contract. (2) The office should always, before directing the disabled workman to the employer who has asked for him, become familiar with the contract between the parties. (3) The placing office should cooperate with the office in the region to which the disabled man is sent, in order to know whether the conditions stipulated in the contract are kept by the employers, and if adequate living conditions can be assured in the locality in which the workman will reside. (4) Managers of the offices should get in touch with the employers in the trades in which the disabled men are likely to be employed in order to show the employers the possibilities for their employing wounded men. In this way they can dissipate doubts that may exist on this subject. (5) Employment offices should keep in intimate relation with the departmental committees of the disabled. Only the close and con-

tinued collaboration of these two organizations can give satisfactory results, either on the economic or on the moral side. (6) Employment offices should impress upon disabled men the desirability of entering schools and learning trades suited to their infirmities, and of not being seduced by offers of immediate employment which may be remunerative now because of the present abnormal demand for labor or because of the interest which is felt in the disabled. After the War these employments will not suffice for them and they will find that results are demanded of them more in keeping with the high wages, employers forgetting with time the sentiments which have guided them in employing the wounded. (7) Employment offices should make it their special effort to see that all disabled men capable of filling positions are put in the way of securing work of as high a grade as is possible for them and in which they will be most useful to society. If the organization of the offices is good and the cooperation between them sufficiently close, they will find it easy to attain these ends.

VII. Ought it to be made obligatory for employers to employ disabled soldiers?

Laws have been proposed making obligatory the employment of a certain number of disabled men in Government service or any of the enterprises enjoying governmental assistance and making it obligatory on all employers to employ a proportionate number of disabled men.

These measures are considered justifiable. If, it is said, the owners of large businesses were frightened at the thought of the law making it their duty to employ some injured men among a large personnel of employees, and if such a thought could be capable of discouraging their initiative, one might well fear that left to themselves they would fail of the duty of employing the disabled, and the latter would be left to live on their pensions alone. So far these laws have not been necessary in France, employers giving evidence of their appreciation of their moral obligation to employ a proportionate number of disabled employees in their establishments.

The following resolutions on the questions discussed were proposed for the adoption of the interallied conference:

1. So far as possible, disabled soldiers should be kept in their former vocations.
2. Disabled men should be kept so far as the trade followed by them will permit, in the region in which they lived before the war.
3. It is not best, in the majority of cases, to create special workshops for disabled soldiers.
4. The disabled soldiers should receive for equal production, wages equal to those of normal workmen.
5. In general, it is preferable to commit the placement of disabled soldiers to public and private organizations which are charged with the placement of normal workmen.

However, it is advisable (1) for the vocational schools to place their pupils directly, (2) for the war offices which have already been constituted in each allied country to continue their placement work until the termination of hostilities.

6. Public and private placement services should apply, in placing the disabled soldiers, besides the general rules for placing normal workmen, stricter rules, notably those concerning the stability of employment, the conditions of labor, and the scale of wages.

7. It belongs to the legislature in each allied country to decide whether or not employers should be placed under obligation to employ disabled soldiers. Meantime, the interallied conference holds that there is a moral obligation resting upon employers to employ disabled soldiers in a number proportional to the importance and personnel of each industrial and commercial establishment.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

The retail prices of food in the United States, according to reports received from retail dealers by the Bureau of Labor Statistics, show a decrease of 4 per cent on March 15, 1918, compared with February 15, 1918. This decrease is caused, to a large extent, by the price changes in eggs, butter, and potatoes, which changes are natural at this season of the year.

Prices are not given for hens because, conforming to the ruling of the Food Administration, no live or fresh hens were sold in March. This restriction was lifted at midnight, April 19.

Of the 15 articles for which relative prices are given, 4 show the following decreases: Eggs, 28 per cent; potatoes, 22 per cent; sugar, 13 per cent; and butter, 5 per cent. Two articles, milk and flour, show no change, while the increase in the price of lard is practically negligible, being less than one-half of 1 per cent.

A table showing the course of prices in the United States in February and March, 1918, is given below:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON FEB. 15, 1918, AND MAR. 15, 1918.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price.		Relative price.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak	Pound	$0.334	$0.338	131	133
Round steak	do	.314	.318	141	143
Rib roast	do	.263	.268	133	135
Chuck roast	do	.227	.232		
Plate beef	do	.177	.182		
Pork chops	do	.336	.339	160	161
Bacon	do	.484	.488	179	181
Ham	do	.438	.441	163	164
Lard	do	.330	.332	209	210
Hens	do	.362		170	
Salmon, canned	do	.291	.295		
Eggs	Dozen	.611	.443	177	128
Butter	Pound	.579	.552	151	144
Cheese	do	.349	.351		
Milk	Quart	.134	.134	151	151
Bread	16-oz. loaf[1]	.083	.084	166	168
Flour	Pound	.066	.066	200	200
Corn meal	do	.070	.072	233	240
Rice	do	.118	.120		
Potatoes	do	.032	.025	188	147
Onions	do	.049	.040		
Beans, navy	do	.181	.181		
Prunes	do	.165	.165		
Raisins, seeded	do	.150	.151		
Sugar	do	.106	.092	193	167
Coffee	do	.304	.304		
Tea	do	.609	.615		
All articles combined				161	154

[1] 16 ounces, weight of dough.

Prices of food as a whole advanced 16 per cent in the year from March 15, 1917, to March 15, 1918.

In this one year period, the only decline in price is that of potatoes. This article decreased 51 per cent. Corn meal shows the greatest increase, or 75 per cent. Sugar shows the least increase, or 4 per cent.

The increases in the prices of the other articles range from 14 per cent to 47 per cent and are in detail as follows: Rib roast, 14 per cent; flour and sirloin steak, 15 per cent each; bread, 17 per cent; butter, 19 per cent; round steak, 20 per cent; pork chops, 21 per cent; eggs, 27 per cent; ham, 31 per cent; milk, 35 per cent; lard, 39 per cent; and bacon, 47 per cent.

Food as a whole was 59 per cent higher in March, 1918, than in the same month in 1913. In this 5-year period, every article increased in price 33 per cent and over. Flour was just twice as high in March, 1918, as in March, 1913. Lard increased 112 per cent and corn meal, 145 per cent. The increase in only four articles was less than 50 per cent. Eleven articles increased over 50 per cent, and 3 of these increased 100 per cent and over. The percentages of increases in detail for this 5-year period are as follows: Corn meal, 145 per cent; lard, 112 per cent; flour, 100 per cent; bacon, 87 per cent; ham and sugar, 69 per cent; bread, 68 per cent; potatoes, 67 per cent; eggs and pork chops, 66 per cent; milk, 51 per cent; round steak, 49 per cent; rib roast, 38 per cent; sirloin steak, 37 per cent; and butter, 33 per cent.

A table showing the average and relative retail prices of food in the United States on March 15 of each year, 1913 to 1918, inclusive, follows:

AVERAGE MONEY PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAR. 15 OF EACH YEAR, 1913 TO 1918, INCLUSIVE.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price, Mar. 15—						Relative price, Mar. 15—					
		1913	1914	1915	1916	1917	1918	1913	1914	1915	1916	1917	1918
Sirloin steak	Lb.	$0.246	$0.254	$0.246	$0.262	$0.295	$0.338	97	100	97	104	116	133
Round steak	do.	.213	.230	.221	.233	.267	.318	96	103	99	104	119	143
Rib roast	do.	.193	.199	.195	.206	.233	.268	98	101	99	104	118	135
Chuck roast	do.	.....	.169	.160	.165	.193	.232	.....	.....	.....	.....	.....	.....
Plate beef	do.	.....	.124	.122	.124	.146	.182	.....	.....	.....	.....	.....	.....
Pork chops	do.	.202	.209	.177	.218	.279	.339	97	100	85	104	133	161
Bacon	do.	.261	.267	.264	.276	.333	.488	97	99	98	103	123	181
Ham	do.	.262	.265	.256	.303	.338	.441	97	99	95	113	125	164
Lard	do.	.156	.156	.152	.182	.238	.332	99	99	96	115	151	210
Salmon, canned	do.	.....	.....	.198	.200	.222	.295	.....	.....	.....	.....	.....	.....
Eggs	Doz.	.263	.308	.255	.285	.349	.443	77	90	74	82	101	128
Butter	Lb.	.414	.351	.359	.402	.461	.552	108	92	94	105	121	144
Cheese	do.	.....	.....	.232	.250	.323	.351	.....	.....	.....	.....	.....	.....
Milk	Qt.	.089	.090	.088	.088	.100	.134	100	101	99	100	112	151
Bread	16 oz.[1]	.....	.055	.063	.064	.072	.084	100	110	126	128	144	168
Flour	Lb.	.033	.033	.044	.039	.057	.066	100	99	136	120	174	200
Corn meal	do.	.030	.031	.033	.032	.041	.072	98	103	110	107	137	240
Rice	do.	.....	.....	.091	.091	.091	.120	.....	.....	.....	.....	.....	.....
Potatoes	do.	.015	.019	.014	.024	.052	.025	88	107	82	140	207	147
Onions	do.	.....	.....	.033	.045	.125	.040	.....	.....	.....	.....	.....	.....
Beans, navy	do.	.....	.....	.076	.092	.154	.181	.....	.....	.....	.....	.....	.....
Prunes	do.	.....	.....	.137	.133	.141	.165	.....	.....	.....	.....	.....	.....
Raisins, seeded	do.	.....	.....	.125	.126	.141	.151	.....	.....	.....	.....	.....	.....
Sugar	do.	.054	.051	.056	.074	.087	.092	99	93	120	137	160	167
Coffee	do.	.....	.....	.299	.299	.299	.304	.....	.....	.....	.....	.....	.....
Tea	do.	.....	.....	.546	.546	.546	.615	.....	.....	.....	.....	.....	.....
All articles combined		.....	.....	.....	.....	.....	.....	**97**	**99**	**98**	**107**	**133**	**154**

[1] Loaf; 16 ounces, weight of dough.

The next table gives average retail prices for February, 1918 and for March, 1913, 1914, 1917, and 1918, for 15 of the larger cities. The prices for Atlanta, Ga., are not included as less than 80 per cent of the firms of that city sent in their reports for March, 1918, to the bureau.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	(1)	(1)	(1)	(1)	(1)	$0.220	$0.238	$0.282	$0.334	$0.338
Round steak	do	(1)	(1)	(1)	(1)	(1)	.207	.218	.268	.329	.329
Rib roast	do	(1)	(1)	(1)	(1)	(1)	.180	.180	.218	.255	.268
Chuck roast	do	(1)	(1)	(1)	(1)	(1)	.....	.153	.190	.237	.237
Plate beef	do	(1)	(1)	(1)	(1)	(1)	.....	.128	.154	.186	.189
Pork chops	do	(1)	(1)	(1)	(1)	(1)	.193	.184	.258	.344	.343
Bacon, sliced	do	(1)	(1)	(1)	(1)	(1)	.220	.236	.288	.449	.446
Ham, sliced	do	(1)	(1)	(1)	(1)	(1)	.300	.290	.380	.479	.482
Lard	do	(1)	(1)	(1)	(1)	(1)	.140	.144	.238	.326	.325
Lamb	do	(1)	(1)	(1)	(1)	(1)	.183	.185	.265	.332	.337
Hens	do	(1)	(1)	(1)	(1)	(1)	.218	.208	.278	.403	.....
Salmon, canned	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.183	.261	.256
Eggs, strictly fresh	Dozen	(1)	(1)	(1)	(1)	(1)	.217	.316	.314	.655	.421
Butter	Pound	(1)	(1)	(1)	(1)	(1)	.421	.374	.486	.604	.583
Cheese	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.335	.357	.364
Milk	Quart	(1)	(1)	(1)	(1)	(1)	.088	.087	.092	.130	.130
Bread	16-oz. loaf[2]	(1)	(1)	(1)	(1)	(1)	.048	.049	.066	.077	.084
Flour	Pound	(1)	(1)	(1)	(1)	(1)	.032	.032	.058	.067	.068
Corn meal	do	(1)	(1)	(1)	(1)	(1)	.025	.025	.036	.060	.067
Rice	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.093	.115	.117
Potatoes	do	(1)	(1)	(1)	(1)	(1)	.015	.019	.056	.036	.027
Onions	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.139	.049	.041
Beans, navy	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.150	.182	.184
Prunes	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.130	.166	.169
Raisins	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.140	.151	.149
Sugar	do	(1)	(1)	(1)	(1)	(1)	.051	.046	.086	.090	.087
Coffee	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.235	.282	.285
Tea	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.550	.644	.633
		Boston, Mass.					Buffalo, N. Y.				
Sirloin steak	do	$0.346	$0.322	$0.396	$0.424	$0.423	$0.220	$0.216	$0.265	$0.321	$0.324
Round steak	do	.330	.343	.376	.430	.428	.190	.194	.238	.299	.301
Rib roast	do	.234	.244	.274	.303	.298	.173	.168	.200	.253	.257
Chuck roast	do	.....	.168	.218	.254	.249	.....	.154	.180	.230	.234
Plate beef	do	.....	.....	.....	.....	.....	.....	.118	.150	.179	.179
Pork chops	do	.222	.227	.279	.345	.346	.193	.198	.303	.321	.342
Bacon, sliced	do	.254	.250	.317	.460	.463	.210	.202	.290	.438	.448
Ham, sliced	do	.288	.313	.373	.460	.458	.250	.253	.350	.448	.453
Lard	do	.157	.154	.243	.335	.335	.141	.141	.225	.318	.323
Lamb	do	.218	.212	.279	.333	.334	.173	.163	.233	.294	.301
Hens	do	.242	.247	.300	.380	.....	.217	.218	.280	.360	.....
Salmon, canned	do	.....	.....	.225	.308	.308	.....	.....	.192	.286	.288
Eggs, strictly fresh	Dozen	.328	.347	.450	.748	.546	.247	.327	.380	.690	.468
Butter	Pound	.414	.357	.457	.560	.558	.406	.341	.450	.585	.540
Cheese	do	.....	.....	.321	.336	.335	.....	.....	.312	.342	.345
Milk	Quart	.089	.089	.105	.145	.145	.080	.080	.100	.140	.140
Bread	16-oz. loaf[2]	.052	.052	.069	.076	.080	.050	.046	.076	.078	.083
Flour	Pound	.037	.037	.053	.073	.070	.029	.029	.053	.063	.064
Corn meal	do	.035	.035	.048	.079	.079	.025	.026	.040	.075	.078
Rice	do	.....	.....	.098	.122	.123	.....	.....	.095	.121	.123
Potatoes	do	.016	.019	.052	.038	.025	.014	.017	.055	.031	.024
Onions	do	.....	.....	.121	.054	.043	.....	.....	.208	.053	.040
Beans, navy	do	.....	.....	.153	.186	.186	.....	.....	.154	.186	.184
Prunes	do	.....	.....	.144	.170	.170	.....	.....	.132	.172	.175
Raisins	do	.....	.....	.140	.150	.149	.....	.....	.122	.141	.142
Sugar	do	.053	.049	.083	.098	.093	.053	.049	.088	.097	.098
Coffee	do	.....	.....	.334	.341	.341	.....	.....	.333	.306	.305
Tea	do	.....	.....	.600	.631	.638	.....	.....	.425	.567	.570

[1] No averages are shown for this city because over 20 per cent of the firms on the Bureau's list failed to report for March, 1918.
[2] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Continued.

Article.	Unit.	Chicago, Ill.					Cleveland, Ohio.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.220	$0.242	$0.269	$0.301	$0.303	$0.237	$0.249	$0.282	$0.316	$0.318
Round steak	do	.189	.210	.233	.272	.274	.210	.221	.258	.299	.301
Rib roast	do	.194	.194	.216	.251	.255	.192	.196	.227	.252	.259
Chuck roast	do	.....	.160	.182	.214	.220	.....	.170	.202	.236	.239
Plate beef	do	.....	.119	.137	.166	.169	.....	.124	.143	.177	.184
Pork chops	do	.179	.184	.258	.301	.309	.198	.203	.312	.326	.336
Bacon, sliced	do	.298	.309	.348	.499	.492	.256	.278	.349	.477	.483
Ham, sliced	do	.313	.312	.343	.448	.450	.335	.357	.400	.455	.469
Lard	do	.146	.152	.226	.317	.321	.161	.163	.252	.322	.328
Lamb	do	.197	.195	.250	.306	.316	.203	.191	.288	.311	.323
Hens	do	.199	.203	.268	.352	.....	.227	.230	.307	.373	.....
Salmon, canned	do	.....	.....	.246	.303	.286	.....	.....	.200	.281	.285
Eggs, strictly fresh	Dozen	.234	.277	.323	.593	.407	.272	.287	.354	.702	.446
Butter	Pound	.404	.329	.445	.547	.506	.434	.360	.495	.578	.539
Cheese	do	.....	.....	.318	.377	.381	.....	.....	.317	.342	.340
Milk	Quart	.080	.080	.090	.119	.119	.088	.080	.100	.130	.130
Bread	16 oz. loaf [2]	.054	.054	.073	.084	.089	.049	.050	.070	.078	.081
Flour	Pound	.027	.029	.053	.063	.064	.032	.032	.058	.068	.067
Corn meal	do	.029	.029	.047	.069	.071	.027	.029	.043	.069	.071
Rice	do	.....	.....	.087	.121	.124	.....	.....	.092	.121	.121
Potatoes	do	.013	.017	.045	.029	.020	.014	.018	.054	.031	.022
Onions	do	.....	.....	.111	.046	.036	.....	.....	.130	.048	.034
Beans, navy	do	.....	.....	.157	.185	.184	.....	.....	.160	.177	.177
Prunes	do	.....	.....	.143	.165	.165	.....	.....	.140	.172	.173
Raisins	do	.....	.....	.144	.151	.150	.....	.....	.130	.146	.146
Sugar	do	.049	.050	.082	.087	.087	.055	.050	.092	.094	.089
Coffee	do	.....	.....	.283	.282	.286	.....	.....	.288	.291	.300
Tea	do	.....	.....	.530	.591	.583	.....	.....	.433	.580	.595
		Denver, Colo.					Detroit, Mich.				
Sirloin steak	do	$0.227	$0.229	$0.244	$0.303	$0.307	$0.240	$0.241	$0.270	$0.321	$0.321
Round steak	do	.196	.211	.225	.282	.286	.194	.203	.232	.298	.293
Rib roast	do	.166	.174	.198	.236	.238	.198	.198	.236	.259	.271
Chuck roast	do	.....	.158	.175	.209	.217	.....	.156	.178	.224	.224
Plate beef	do	.....	.097	.118	.151	.152	.....	.119	.134	.177	.181
Pork chops	do	.176	.192	.255	.325	.330	.186	.188	.262	.331	.331
Bacon, sliced	do	.270	.274	.367	.483	.518	.224	.228	.300	.457	.474
Ham, sliced	do	.283	.351	.367	.475	.489	.255	.280	.300	.426	.428
Lard	do	.139	.163	.243	.341	.344	.162	.160	.230	.336	.335
Lamb	do	.169	.164	.236	.292	.297	.172	.170	.244	.324	.327
Hens	do	.207	.204	.233	.338	.....	.216	.223	.276	.375	.....
Salmon, canned	do	.....	.....	.200	.279	.280	.....	.....	.200	.274	.290
Eggs, strictly fresh	Dozen	.261	.260	.350	.600	.415	.252	.314	.350	.668	.449
Butter	Pound	.390	.336	.428	.560	.497	.406	.337	.454	.568	.526
Cheese	do	.....	.....	.325	.361	.357	.....	.....	.300	.343	.350
Milk	Quart	.084	.084	.083	.115	.115	.080	.089	.110	.140	.140
Bread	16 oz. loaf [2]	.047	.048	.075	.087	.086	.050	.050	.073	.075	.084
Flour	Pound	.026	.026	.047	.054	.056	.031	.030	.056	.065	.068
Cornmeal	do	.024	.026	.032	.056	.060	.027	.029	.045	.077	.074
Rice	do	.....	.....	.092	.116	.120	.....	.....	.086	.121	.122
Potatoes	do	.010	.015	.047	.022	.020	.012	.016	.051	.029	.021
Onions	do	.....	.....	.144	.044	.034	.....	.....	.119	.055	.044
Beans, navy	do	.....	.....	.138	.174	.173	.....	.....	.155	.182	.179
Prunes	do	.....	.....	.138	.171	.168	.....	.....	.129	.171	.170
Raisins	do	.....	.....	.131	.153	.147	.....	.....	.128	.141	.141
Sugar	do	.054	.048	.082	.090	.092	.050	.050	.090	.089	.088
Coffee	do	.....	.....	.288	.300	.295	.....	.....	.275	.304	.301
Tea	do	.....	.....	.488	.575	.576	.....	.....	.475	.573	.547

[2] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Continued.

Article.	Unit.	Milwaukee, Wis.					New York, N. Y.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.215	$0.230	$0.277	$0.302	$0.303	$0.254	$0.260	$0.296	$0.347	$0.346
Round steak	do	.200	.210	.247	.287	.288	.238	.254	.291	.356	.357
Rib roast	do	.178	.185	.218	.248	.249	.217	.218	.254	.295	.296
Chuck roast	do	.....	.163	.195	.227	.229	.....	.161	.192	.237	.233
Plate beef	do	.....	.118	.140	.171	.173	.....	.148	.172	.220	.221
Pork chops	do	.188	.182	.272	.306	.311	.213	.218	.285	.349	.349
Bacon, sliced	do	.273	.273	.325	.479	.482	.236	.251	.311	.459	.457
Ham, sliced	do	.268	.277	.342	.452	.451	[1].198	[1].195	[1].256	[1].336	.333
Lard	do	.153	.160	.244	.326	.328	.160	.157	.232	.331	.334
Lamb	do	.200	.188	.290	.323	.328	.173	.166	.237	.283	.301
Hens	do	.218	.212	.273	.326	.....	.211	.216	.274	.365	.....
Salmon, canned	do	.....	.....	.233	.272	.284	.....	.....	.258	.350	.353
Eggs, strictly fresh	Dozen	.232	.259	.342	.635	.411	.318	.398	.408	.697	.501
Butter	Pound	.396	.324	.475	.551	.514	.412	.349	.470	.582	.527
Cheese	do	.....	.....	.317	.348	.354	.....	.....	.313	.345	.344
Milk	Quart	.070	.070	.080	.110	.110	.090	.090	.109	.146	.146
Bread	16-oz. loaf[2]	.050	.051	.077	.075	.076	.053	.055	.077	.077	.079
Flour	Pound	.031	.030	.057	.065	.065	.032	.032	.057	.071	.078
Corn meal	do	.033	.033	.050	.075	.082	.034	.034	.051	.080	.082
Rice	do	.....	.....	.095	.121	.120	.....	.....	.089	.117	.119
Potatoes	do	.012	.016	.051	.029	.019	.023	.016	.057	.044	.036
Onions	do	.....	.....	.137	.147	.038	.....	.....	.111	.052	.038
Beans, navy	do	.....	.....	.153	.186	.183	.....	.....	.152	.183	.183
Prunes	do	.....	.....	.148	.166	.159	.....	.....	.142	.169	.171
Raisins	do	.....	.....	.145	.148	.146	.....	.....	.137	.149	.149
Sugar	do	.051	.050	.081	.086	.089	.048	.045	.084	.091	.088
Coffee	do	.....	.....	.283	.268	.270	.....	.....	.267	.267	.266
Tea	do	.....	.....	.557	.589	.606	.....	.....	.454	.536	.584
		Philadelphia, Pa.					Pittsburgh, Pa.				
Sirloin steak	do	$0.286	$0.300	$0.345	$0.401	$0.398	$0.260	$0.277	$0.315	$0.377	$0.373
Round steak	do	.235	.257	.309	.376	.374	.220	.237	.285	.351	.347
Rib roast	do	.214	.219	.256	.303	.303	.218	.217	.247	.290	.296
Chuck roast	do	.....	.178	.215	.258	.260	.....	.168	.200	.256	.257
Plate beef	do	.....	.119	.145	.192	.190	.....	.128	.148	.192	.188
Pork chops	do	.203	.215	.294	.363	.356	.213	.218	.308	.333	.347
Bacon, sliced	do	.238	.257	.326	.470	.466	.281	.295	.337	.501	.502
Ham, sliced	do	.297	.296	.395	.488	.489	.288	.290	.373	.478	.478
Lard	do	.150	.152	.235	.334	.334	.151	.156	.236	.332	.330
Lamb	do	.186	.195	.266	.324	.326	.225	.203	.303	.347	.364
Hens	do	.218	.238	.293	.371	.....	.264	.270	.350	.436	.....
Salmon, canned	do	.....	.....	.193	.265	.265	.....	.....	.227	.305	.306
Eggs, strictly fresh	Dozen	.254	.347	.368	.690	.460	.254	.343	.350	.697	.458
Butter	Pound	.475	.407	.519	.630	.592	.434	.367	.489	.591	.568
Cheese	do	.....	.....	.333	.374	.377	.....	.....	.325	.357	.366
Milk	Quart	.080	.080	.090	.130	.132	.088	.092	.103	.138	.135
Bread	16-oz. loaf[2]	.043	.043	.064	.071	.071	.048	.048	.071	.086	.086
Flour	Pound	.032	.032	.058	.072	.070	.031	.032	.058	.069	.068
Corn meal	do	.028	.028	.037	.073	.076	.027	.029	.045	.085	.082
Rice	do	.....	.....	.097	.130	.131	.....	.....	.094	.121	.123
Potatoes	do	.021	.025	.062	.039	.028	.015	.018	.054	.037	.026
Onions	do	.....	.....	.122	.052	.039	.....	.....	.129	.050	.037
Beans, navy	do	.....	.....	.148	.186	.184	.....	.....	.165	.190	.188
Prunes	do	.....	.....	.142	.168	.171	.....	.....	.138	.175	.172
Raisins	do	.....	.....	.127	.140	.142	.....	.....	.142	.149	.146
Sugar	do	.049	.045	.079	.092	.088	.056	.055	.099	.098	.099
Coffee	do	.....	.....	285	.278	.279	.....	.....	.270	.299	.301
Tea	do	.....	.....	.544	.596	.587	.....	.....	.567	.728	.732

[1] Whole. [2] 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Concluded.

Article.	Unit.	St. Louis, Mo.					San Francisco, Cal.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.228	$0.258	$0.276	$0.300	$0.317	$0.203	$0.210	$0.231	$0.264	$0.284
Round steak	do	.202	.234	.263	.297	.312	.190	.197	.227	.258	.282
Rib roast	do	.147	.200	.221	.261	.269	.207	.221	.237	.249	.267
Chuck roast	do	.....	.155	.179	.213	.222	.....	.155	.163	.191	.206
Plate beef	do	.....	.142	.136	.171	.180	.....	.150	.156	.182	.198
Pork chops	do	.180	.188	.257	.293	.300	.240	.250	.308	.351	.356
Bacon, sliced	do	.238	.250	.322	.478	.488	.321	.337	.375	.538	.535
Ham, sliced	do	.267	.275	.356	.458	.467	.270	.279	.383	.494	.494
Lard	do	.136	.126	.226	.293	.303	.169	.165	.235	.334	.337
Lamb	do	.171	.179	.265	.302	.317	.173	.183	.253	.293	.314
Hens	do	.186	.196	.251	.347	.....	.238	.240	.283	.418	.....
Salmon, canned	do	.....	.....	.196	.288	.289	.....	.....	.196	.254	.253
Eggs, strictly fresh	Dozen	.220	.258	.298	.573	.398	.235	.246	.325	.489	.433
Butter	Pound	.412	.320	.476	.580	.563	.429	.307	.417	.589	.568
Cheese	do	.....	.....	.314	.365	.368	.....	.....	.288	.329	.326
Milk	Quart	.080	.080	.095	.130	.120	.100	.100	.100	.121	.121
Bread	16 oz. loaf[2]	.049	.050	.074	.088	.085	.051	.052	.063	.084	.084
Flour	Pound	.030	.028	.053	.061	.061	.033	.034	.051	.062	.061
Corn meal	do	.021	.026	.035	.062	.068	.034	.035	.044	.069	.073
Rice	do	.....	.....	.086	.111	.113	.....	.....	.088	.119	.120
Potatoes	do	.013	.017	.048	.031	.023	.012	.017	.045	.023	.023
Onions	do	.....	.....	.114	.044	.029	.....	.....	.092	.034	.026
Beans, navy	do	.....	.....	.149	.179	.180	.....	.....	.147	.158	.159
Prunes	do	.....	.....	.141	.167	.168	.....	.....	.124	.142	.135
Raisins	do	.....	.....	.150	.169	.169	.....	.....	.135	.128	.137
Sugar	do	.051	.047	.083	.087	.086	.053	.051	.079	.087	.088
Coffee	do	.....	.....	.237	.274	.275	.....	.....	.317	.301	.300
Tea	do	.....	.....	.543	.652	.660	.....	.....	.517	.543	.529
		Seattle, Wash.					Washington, D. C				
Sirloin steak	do	$0.218	$0.240	$0.250	$0.300	$0.305	$0.264	$0.271	$0.291	$0.380	$0.392
Round steak	do	.200	.212	.230	.285	.290	.231	.233	.279	.360	.369
Rib roast	do	.182	.191	.222	.251	.255	.210	.210	.240	.296	.308
Chuck roast	do	.....	.151	.172	.214	.217	.....	.170	.203	.257	.266
Plate beef	do	.....	.128	.135	.183	.184	.....	.128	.158	.202	.196
Pork chops	do	.234	.240	.288	.388	.388	.219	.208	.283	.378	.387
Bacon, sliced	do	.300	.314	.376	.535	.533	.254	.246	.308	.485	.485
Ham, sliced	do	.300	.300	.360	.469	.465	.286	.286	.350	.473	.481
Lard	do	.173	.162	.240	.327	.334	.146	.143	.230	.336	.333
Lamb	do	182	.191	.262	.327	.328	.214	.199	.282	.346	.368
Hens	do	.240	.250	.275	.359	.....	.221	.230.	.283	.391	.....
Salmon, canned	do	.....	.....	.218	.283	.289	.....	.....	.197	.287	.300
Eggs, strictly fresh	Dozen	.235	.257	.321	.528	.456	.226	.294	.331	.671	.413
Butter	Pound	.440	.350	.444	.588	.582	.441	.359	.490	.605	.592
Cheese	do	.....	.....	.281	.308	.308	.....	.....	.326	.357	.363
Milk	Quart	.086	.088	.100	.126	.126	.090	.090	.100	.140	.140
Bread	16 oz. loaf[2]	.049	.051	.081	.087	.086	.049	.050	.071	.074	.082
Flour	Pound	.030	.029	.048	.058	.058	.036	.038	.057	.069	.068
Corn meal	do	.030	.032	.040	.072	.072	.025	.025	.036	.063	.064
Rice	do	.....	.....	.086	.117	.121	.....	.....	.089	.127	.127
Potatoes	do	.009	.012	.025	.017	.016	.015	.019	.051	.036	.024
Onions	do	.....	.....	.115	.042	.044	.....	.....	.138	.050	.039
Beans, navy	do	.....	.....	.150	.168	.169	.....	.....	.156	.196	.178
Prunes	do	.....	.....	.130	.146	.145	.....	.....	.140	.175	.175
Raisins	do	.....	.....	.131	.147	.145	.....	.....	.135	.156	.155
Sugar	do	.061	.056	.085	.091	.091	.050	.048	.083	.089	.089
Coffee	do	.....	.....	.326	.312	.315	.....	.....	.286	.293	.296
Tea	do	.....	.....	.500	.564	.556	.....	.....	.557	.637	.652

[2] 16 ounces, weight of dough.

The following table gives average retail prices in 29 smaller cities for February and March, 1918:

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES.

[The average prices below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Birmingham, Ala.		Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak	Lb.	$0.352	$0.349	$0.418	$0.402	$0.310	$0.323	$0.308	$0.312	$0.282	$0.288
Round steak	do.	.376	.322	.384	.368	.278	.299	.298	.302	.273	.279
Rib roast	do.	.279	.267	.316	.302	.253	.270	.263	.268	.244	.246
Chuck roast	do.	.225	.223	.274	.263	.209	.223	.210	.208	.210	.210
Plate beef	do.	.170	.178	.170	.175	.152	.162	.181	.190	.177	.183
Pork chops	do.	.339	.325	.338	.329	.356	.356	.363	.362	.284	.322
Bacon, sliced	do.	.520	.530	.506	.506	.572	.568	.507	.506	.453	.451
Ham, sliced	do.	.440	.445	.501	.501	.494	.494	.460	.460	.434	.438
Lard	do.	.321	.323	.330	.331	.339	.338	.338	.340	.302	.310
Lamb	do.	.350	.350	.320	.312	.319	.330	.357	.373	.277	.290
Hens	do.	.300	.....	.368	.....	.383	.....	.363	.....	.365	.....
Salmon, canned	do.	.267	.275	.362	.366	.355	.383	.274	.280	.261	.259
Eggs, strictly fresh	Doz.	.522	.396	.794	.542	.694	.500	.650	.438	.614	.384
Butter	Lb.	.590	.588	.536	.530	.595	.588	.569	.580	.585	.545
Cheese	do.	.363	.353	.347	.344	.350	.350	.352	.353	.368	.376
Milk	Qt.	.152	.152	.145	.140	.150	.150	.155	.160	.130	.130
Bread	16 oz.[1]	.089	.089	.083	.089	.106	.106	.091	.094	.081	.082
Flour	Lb.	.067	.067	.070	.070	.068	.067	.076	.074	.070	.070
Corn meal	do.	.055	.056	.085	.082	.074	.074	.061	.065	.060	.064
Rice	do.	.121	.118	.126	.125	.118	.125	.092	.087	.118	.117
Potatoes	do.	.039	.030	.041	.029	.019	.018	.043	.036	.037	.029
Onions	do.	.058	.040	.058	.046	.043	.037	.053	.051	.051	.048
Beans, navy	do.	.188	.185	.190	.185	.165	.179	.191	.194	.159	.164
Prunes	do.	.161	.161	.171	.169	.157	.158	.160	.165	.160	.153
Raisins	do.	.158	.157	.158	.158	.147	.146	.150	.150	.150	.158
Sugar	do.	.094	.091	.100	.097	.100	.100	.091	.090	.094	.093
Coffee	do.	.320	.323	.326	.319	.420	.427	.282	.281	.273	.264
Tea	do.	.762	.796	.634	.618	.759	.778	.636	.645	.706	.694

Article.	Unit.	Columbus, Ohio.		Dallas, Tex.		Fall River, Mass.		Indianapolis, Ind.		Jacksonville, Fla.	
Sirloin steak	do.	$0.322	$0.323	$0.339	$0.340	$0.425	$0.435	$0.315	$0.322	$0.348	$0.338
Round steak	do.	.291	.300	.316	.334	.364	.372	.313	.313	.306	.313
Rib roast	do.	.249	.251	.272	.288	.278	.278	.239	.238	.277	.269
Chuck roast	do.	.226	.230	.244	.259	.235	.242	.216	.222	.213	.228
Plate beef	do.	.173	.179	.196	.211	.....	.....	.171	.177	.167	.170
Pork chops	do.	.316	.313	.341	.341	.337	.337	.325	.336	.353	.344
Bacon, sliced	do.	.478	.481	.541	.547	.445	.448	.476	.400	.500	.505
Ham, sliced	do.	.445	.455	.461	.483	.437	.436	.457	.453	.438	.438
Lard	do.	.328	.329	.339	.345	.317	.320	.310	.315	.333	.329
Lamb	do.	.315	.325	.367	.417	.319	.324	.283	.300	.321	.331
Hens	do.	.325	.....	.302	.....	.363	.....	.333	.....	.363	.....
Salmon, canned	do.	.275	.266	.282	.277	.292	.315	.240	.239	.285	.285
Eggs, strictly fresh	Doz.	.615	.374	.497	.400	.784	.576	.598	.369	.556	.470
Butter	Lb.	.574	.544	.551	.531	.529	.542	.568	.542	.599	.594
Cheese	do.	.347	.353	.365	.353	.331	.331	.384	.385	.353	.358
Milk	Qt.	.130	.130	.158	.163	.128	.130	.107	.107	.180	.180
Bread	16 oz.[1]	.089	.089	.078	.085	.088	.088	.077	.089	.087	.084
Flour	Lb.	.067	.066	.065	.065	.074	.074	.065	.066	.071	.070
Corn meal	do.	.062	.066	.069	.070	.087	.093	.065	.067	.061	.063
Rice	do.	.123	.119	.119	.118	.121	.121	.120	.118	.106	.106
Potatoes	do.	.031	.013	.032	.026	.038	.030	.031	.021	.043	.037
Onions	do.	.052	.045	.057	.047	.051	.044	.048	.047	.058	.054
Beans, navy	do.	.181	.181	.179	.182	.183	.186	.178	.180	.195	.196
Prunes	do.	.157	.154	.172	.170	.173	.168	.163	.165	.176	.177
Raisins	do.	.152	.151	.152	.156	.153	.159	.173	.173	.176	.181
Sugar	do.	.094	.090	.094	.094	.100	.099	.091	.092	.098	.092
Coffee	do.	.300	.288	.362	.355	.324	.334	.294	.295	.327	.319
Tea	do.	.780	.800	.863	.823	.535	.506	.703	.765	.768	.724

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES—Continued.

Article.	Unit.	Kansas City, Mo.		Little Rock, Ark.		Los Angeles, Cal.		Louisville, Ky.		Manchester, N. H.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak	Lb.	$0.321	$0.329	$0.313	$0.340	$0.290	$0.310	$0.303	$0.315	$0.438	$0.441
Round steak	do	.296	.302	.279	.293	.254	.278	.293	.295	.398	.400
Rib roast	do	.233	.243	.260	.260	.236	.262	.231	.241	.269	.270
Chuck roast	do	.202	.211	.204	.221	.200	.223	.210	.221	.239	.242
Plate beef	do	.167	.168	.197	.193	.158	.185	.183	.204	.....	.....
Pork chops	do	.310	.311	.344	.337	.378	.388	.320	.324	.338	.324
Bacon, sliced	do	.493	.495	.506	.529	.529	.564	.498	.494	.453	.459
Ham, sliced	do	.456	.460	.488	.481	.519	.529	.450	.461	.416	.418
Lard	do	.344	.344	.341	.340	.333	.337	.315	.326	.342	.345
Lamb	do	.271	.255	.317	.345	.314	.320	.323	.333	.330	.325
Hens	do	.293	.....	.329	.....	.378	.....	.373	.....	.378	.....
Salmon, canned	do	.292	.300	.295	.289	.326	.329	.250	.246	.295	.307
Eggs, strictly fresh	Doz.	.586	.397	.567	.393	.491	.430	.608	.389	.715	.539
Butter	Lb.	.562	.534	.575	.585	.555	.538	.597	.575	.579	.583
Cheese	do	.360	.363	.379	.374	.335	.337	.369	.370	.338	.339
Milk	Qt.	.123	.122	.150	.150	.140	.140	.128	.128	.140	.140
Bread	16 oz.[1]	.089	.088	.093	.093	.076	.076	.081	.084	.077	.077
Flour	Lb.	.064	.067	.067	.067	.063	.063	.068	.068	.071	.069
Corn meal	do	.069	.074	.064	.066	.080	.083	.063	.065	.080	.077
Rice	do	.113	.119	.117	.115	.115	.119	.117	.120	.119	.121
Potatoes	do	.031	.025	.033	.027	.021	.019	.035	.028	.037	.027
Onions	do	.052	.049	.054	.048	.037	.026	.047	.041	.051	.043
Beans, navy	do	.185	.182	.184	.185	.166	.168	.185	.181	.185	.186
Prunes	do	.145	.144	.171	.169	.151	.156	.169	.175	.160	.163
Raisins	do	.145	.146	.149	.153	.141	.138	.142	.159	.153	.153
Sugar	do	.100	.100	.095	.097	.088	.088	.091	.090	.097	.098
Coffee	do	.291	.286	.326	.317	.312	.303	.265	.268	.342	.342
Tea	do	.618	.658	.835	.760	.591	.605	.724	.718	.591	.586

Article.	Unit.	Memphis, Tenn.		Minneapolis, Minn.		Newark, N. J.		New Haven, Conn.		New Orleans, La.	
Sirloin steak	do	$0.302	$0.318	$0.264	$0.277	$0.366	$0.365	$0.418	$0.409	$0.291	$0.301
Round steak	do	.288	.308	.255	.261	.377	.373	.382	.376	.253	.259
Rib roast	do	.243	.264	.214	.226	.302	.298	.318	.312	.243	.253
Chuck roast	do	.204	.233	.197	.205	.266	.265	.276	.268	.192	.199
Plate beef	do	.183	.199	.149	.155	.195	.195	.....	.....	166	.172
Pork chops	do	.331	.321	.302	.304	.356	.362	.337	.327	356	.350
Bacon, sliced	do	.500	.500	.482	.488	.442	.450	.506	.502	.517	.500
Ham, sliced	do	.429	.437	.436	.440	.343	.342	.503	.501	.450	.438
Lard	do	.327	.327	.319	.326	.340	.342	.338	.338	.331	.336
Lamb	do	.306	.330	.259	.279	.336	.349	.335	.327	.301	.319
Hens	do	.318	.....	.315	.....	.367	.....	.383	.....	.368	.....
Salmon, canned	do	.312	.301	.331	.342	.345	.353	.283	.336	.330	.328
Eggs, strictly fresh	Doz.	.500	.384	.585	.384	.718	.513	.783	.565	.485	.395
Butter	do	.581	.559	.534	.489	.609	.552	.519	.498	.569	.549
Cheese	do	.337	.340	.318	.327	.360	.358	.342	.348	.353	.345
Milk	Qt.	.150	.150	.110	.110	.145	.145	.143	.143	.143	.143
Bread	16 oz.[1]	.087	.088	.077	.079	.076	.076	.086	.089	.073	.073
Flour	Lb.	.067	.068	.059	.060	.073	.072	.071	.071	.075	.070
Corn meal	do	.059	.062	.056	.059	.084	.085	.087	.085	.063	.060
Rice	do	.103	.107	.110	.116	.121	.121	.125	.123	.108	.110
Potatoes	do	.037	.026	.024	.018	.042	.034	.040	.034	.038	.034
Onions	do	.051	.041	.039	.031	.058	.049	.062	.049	.045	.037
Beans, navy	do	.191	.188	.176	.179	.187	.185	.190	.191	.174	.173
Prunes	do	.166	.162	.150	.155	.174	.178	.179	.179	.160	.155
Raisins	do	.144	.147	.144	.144	.150	.151	.154	.153	.151	.154
Sugar	do	.096	.092	.091	.093	.096	.093	.105	.101	.090	.088
Coffee	do	.301	.294	.309	.309	.298	.299	.329	.322	.266	.261
Tea	do	.697	.734	.504	.504	.546	.563	.580	.600	.634	.637

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES—Concluded.

Article.	Unit.	Omaha, Nebr.		Portland, Oreg.		Providence, R. I.		Richmond, Va.		Rochester, N. Y.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak	do	$0.302	$0.312	$0.282	$0.281	$0.514	$0.519	$0.330	$0.336	$0.320	$0.323
Round steak	do	.282	.296	.262	.265	.425	.426	.307	.317	.309	.303
Rib roast	do	.234	.241	.254	.255	.333	.334	.270	.269	.263	.259
Chuck roast	do	.205	.217	.204	.208	.298	.301	.233	.245	.250	.243
Plate beef	do	.157	.164	.167	.171	.....	.....	.198	.202	.191	.184
Pork chops	do	.297	.297	.352	.355	.362	.359	.359	.359	.327	.346
Bacon, sliced	do	.486	.490	.514	.529	.471	.476	.479	.470	.443	.447
Ham, sliced	do	.442	.455	.469	.464	.523	.523	.423	.430	.445	.430
Lard	do	.336	.338	.345	.346	.341	.341	.340	.332	.333	.336
Lamb	do	.266	.275	.300	.294	.355	.332	.313	.338	.321	.318
Hens	do	.322	.....	.337	.....	.397	.....	.371	.....	.377	.....
Salmon, canned	do	.285	.288	.336	.338	.305	.309	.238	.244	.294	.298
Eggs, strictly fresh	Doz	.577	.351	.507	.421	.735	.567	.617	.392	.710	.474
Butter	Lb	.549	.504	.591	.594	.572	.576	.599	.596	.565	.552
Cheese	do	.349	.353	.324	.336	.341	.340	.356	.360	.337	.342
Milk	Qt	.123	.123	.127	.126	.145	.145	.147	.147	.136	.136
Bread	16 oz.[1]	.088	.088	.087	.087	.084	.088	.089	.089	.073	.080
Flour	Lb	.060	.060	.057	.056	.068	.069	.072	.069	.067	.067
Corn meal	do	.062	.063	.069	.074	.075	.076	.061	.063	.078	.079
Rice	do	.110	.114	.118	.124	.119	.121	.127	.128	.128	.128
Potatoes	do	.025	.023	.016	.014	.036	.026	.040	.030	.027	.019
Onions	do	.045	.043	.032	.029	.050	.034	.061	.047	.045	.028
Beans, navy	do	.173	.172	.149	.149	.185	.187	.202	.198	.182	.193
Prunes	do	.164	.164	.136	.133	.177	.179	.149	.161	.188	.187
Raisins	do	.166	.168	.137	.137	.147	.149	.149	.149	.151	.151
Sugar	do	.090	.090	.092	.089	.097	.096	.100	.095	.097	.091
Coffee	do	.315	.315	.325	.331	.339	.339	.281	.289	.303	.303
Tea	do	.635	.642	.569	.569	.586	.586	.738	.724	.538	.533

Article.	Unit.	St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
Sirloin steak	do	$0.289	$0.298	$0.280	$0.283	$0.355	$0.357	$0.322	$0.335
Round steak	do	.254	.267	.261	.268	.324	.326	.312	.327
Rib roast	do	.237	.250	.236	.238	.281	.285	.251	.265
Chuck roast	do	.202	.216	.205	.215	.242	.247	.224	.238
Plate beef	do	.146	.158	.170	.173	.179	.184	.190	.195
Pork chops	do	.300	.304	.352	.352	.338	.347	.314	.319
Bacon, sliced	do	.482	.482	.500	.508	.483	.495	.494	.492
Ham, sliced	do	.454	.456	.445	.446	.441	.450	.443	.455
Lard	do	.321	.320	.360	.359	.326	.324	.334	.338
Lamb	do	.266	.277	.292	.293	.332	.334	.314	.333
Hens	do	.297	.....	.348	.....	.387	.....	.280	.....
Salmon, canned	do	.298	.298	.299	.321	.302	.299	.268	.270
Eggs, strictly fresh	Doz	.589	.380	.604	.394	.705	.466	.645	.390
Butter	Lb	.549	.493	.575	.546	.541	.539	.598	.545
Cheese	do	.331	.334	.338	.337	.325	.329	.386	.386
Milk	Qt	.110	.110	.115	.114	.140	.140	.125	.111
Bread	16 oz.[1]	.088	.079	.087	.088	.085	.085	.090	.090
Flour	Lb	.062	.062	.054	.055	.071	.071	.064	.063
Corn meal	do	.065	.067	.074	.075	.....	.....	.075	.083
Rice	do	.120	.128	.109	.108	.121	.124	.126	.130
Potatoes	do	.024	.020	.017	.014	.032	.025	.031	.021
Onions	do	.038	.030	.045	.042	.061	.052	.049	.029
Beans, navy	do	.188	.187	.182	.179	.180	.181	.195	.195
Prunes	do	.165	.165	.154	.150	.174	.171	.164	.169
Raisins	do	.147	.151	.146	.145	.147	.147	.179	.178
Sugar	do	.096	.095	.097	.097	.097	.092	.092	.093
Coffee	do	.319	.323	.354	.350	.316	.318	.295	.296
Tea	do	.543	.550	.647	.627	.596	.586	.675	.696

[1] Loaf; 16 ounces, weight of dough.

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

A comparison of wholesale and retail price changes for important food articles in recent months shows that for most commodities the rise continues to be more pronounced in wholesale than in retail prices. This accords with the well-established principle that wholesale prices respond more quickly to change-producing influences than do retail prices.

In collecting data for the comparison it was found that in some instances it was impossible to obtain both wholesale and retail prices for articles having precisely the same description. For example, fresh beef is not retailed in the same form in which it is customary to handle it at wholesale. In such cases the articles most nearly comparable were used. It was found impracticable, also, in most instances to obtain both wholesale and retail prices for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in contrasting price variations in the retail with those in the wholesale markets.

In the table which follows the wholesale price is in each case the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question. The initials W. and R. are used to designate wholesale and retail prices, respectively.

To assist in comparing wholesale with retail price fluctuations, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential represents even approximately the margin of profit received by the retailer since, in addition to possible differences of grade between the articles shown at wholesale and retail, various items of handling cost are included in the figure.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.
Beef, Chicago:												
Steer loin ends.....W..	Lb..	$0.168	$0.175	$0.160	$0.205	$0.200	$0.200	$0.200	$0.190	$0.235	$0.200	$0.220
Sirloin steak.....R..	Lb..	.232	.260	.258	.281	.265	.269	.293	.302	.306	.302	.303
Price differential.....	.....	.064	.085	.098	.076	.065	.069	.093	.112	.071	.102	.083
Beef, Chicago:												
Steer rounds, No. 2..W..	Lb..	.131	.145	.143	.145	.120	.135	.155	.170	.190	.165	.170
Round steak.....R..	Lb..	.202	.233	.228	.241	.227	.233	.256	.266	.273	.273	.274
Price differential.....	.....	.071	.088	.085	.096	.107	.098	.101	.096	.083	.108	.104
Beef, Chicago:												
Steer ribs, No. 2...W..	Lb..	.157	.165	.145	.175	.160	.175	.210	.200	.230	.200	.200
Rib roast.....R..	Lb..	.195	.212	.213	.229	.223	.216	.241	.246	.247	.254	.255
Price differential.....	.....	.038	.047	.068	.054	.063	.041	.031	.046	.017	.054	.055
Beef, New York:												
No. 2, loins.....W..	Lb..	.158	.183	.170	.200	.180	.195	.190	.190	.275	.235	.225
Sirloin steak.....R..	Lb..	.259	.274	.282	.294	.284	.296	.318	.337	.356	.344	.346
Price differential.....	.....	.101	.091	.112	.094	.104	.101	.128	.147	.081	.109	.121
Beef, New York:												
No. 2, rounds.....W..	Lb..	.121	.135	.135	.145	.130	.150	.170	.175	.190	.180	.190
Round steak.....R..	Lb..	.249	.270	.271	.289	.275	.291	.315	.337	.360	.352	.357
Price differential.....	.....	.128	.135	.136	.144	.145	.141	.145	.162	.170	.172	.167
Beef, New York:												
No. 2, ribs.....W..	Lb..	.151	.165	.160	.180	.160	.185	.200	.190	.275	.235	.215
Rib roast.....R..	Lb..	.218	.225	.227	.243	.238	.254	.270	.279	.298	.294	.296
Price differential.....	.....	.067	.060	.067	.063	.078	.069	.070	.089	.023	.059	.081
Pork, Chicago:												
Loins.....W..	Lb..	.149	.165	.150	.165	.165	.225	.240	.250	.330	.270	.250
Chops.....R..	Lb..	.190	.204	.201	.217	.227	.258	.285	.292	.358	.316	.309
Price differential.....	.....	.041	.039	.051	.052	.062	.033	.015	.042	.028	.046	.059
Pork, New York:												
Loins, western.....W..	Lb..	.152	.163	.153	.165	.170	.210	.235	.235	.300	.265	.255
Chops.....R..	Lb..	.217	.230	.217	.239	.248	.285	.319	.326	.399	.348	.349
Price differential.....	.....	.065	.067	.064	.074	.078	.075	.084	.091	.099	.083	.094
Bacon, Chicago:												
Short clear sides...W..	Lb..	.127	.139	.113	.159	.158	.196	.218	.247	.318	.301	.284
Sliced.....R..	Lb..	.294	.318	.315	.328	.316	.318	.395	.439	.475	.498	.492
Price differential.....	.....	.167	.179	.202	.169	.158	.152	.177	.192	.157	.197	.208
Ham, Chicago:												
Smoked.....W..	Lb..	.166	.175	.163	.190	.188	.228	.243	.243	.283	.298	.304
Smoked, sliced.....R..	Lb..	.266	.338	.328	.349	.333	.343	.382	.414	.439	.428	.450
Price differential.....	.....	.100	.163	.165	.159	.145	.115	.139	.171	.156	.130	.146
Lard, New York:												
Prime contracts...W..	Lb..	.110	.104	.080	.133	.159	.193	.215	.201	.246	.246	.262
Pure tub.....R..	Lb..	.160	.156	.151	.168	.213	.232	.263	.274	.313	.330	.334
Price differential.....	.....	.050	.052	.071	.035	.054	.039	.048	.073	.067	.084	.072
Lamb, Chicago:												
Dressed round.....W..	Lb..	.149	.170	.190	.190	.200	.200	.220	.260	.270	.240	.240
Leg of yearling.....R..	Lb..	.198	.219	.208	.231	.232	.250	.263	.287	.314	.306	.316
Price differential.....	.....	.049	.049	.018	.041	.032	.050	.043	.027	.044	.066	.076
Poultry, New York:												
Dressed fowls.....W..	Lb..	.182	.188	.175	.215	.220	.230	.265	.248	.285	.298	.343
Dressed hens.....R..	Lb..	.214	.220	.219	.256	.261	.274	.293	.287	.323	.326	....
Price differential.....	.....	.032	.032	.044	.041	.041	.044	.028	.039	.038	.028	....
Butter, Chicago:												
Creamery, extra...W..	Lb..	.310	.265	.265	.275	.370	.400	.440	.375	.435	.490	.455
Creamery, extra....R..	Lb..	.362	.312	.322	.335	.438	.445	.484	.432	.487	.544	.506
Price differential.....	.....	.052	.047	.057	.060	.068	.045	.044	.057	.052	.054	.051
Butter, New York:												
Creamery, extra...W..	Lb..	.323	.280	.270	.285	.395	.408	.450	.395	.443	.510	.468
Creamery, extra...R..	Lb..	.382	.328	.336	.346	.460	.470	.513	.453	.515	.574	.527
Price differential.....	.....	.059	.048	.066	.061	.065	.062	.063	.058	.072	.064	.059
Butter, San Francisco:												
Creamery, extra...W..	Lb..	.317	.245	.265	.255	.355	.330	.390	.385	.460	.530	.500
Creamery, extra....R..	Lb..	.388	.329	.338	.333	.425	.417	.452	.455	.545	.602	.568
Price differential.....	.....	.071	.084	.073	.078	.070	.087	.062	.070	.085	.072	.068
Cheese, Chicago:												
Whole milk.....W..	Lb..	.142	.133	.145	.145	.218	.240	.223	.216	.246	.233	.248
Full cream.....R..	Lb..	.....	.....	.229	.242	.321	.318	.327	.339	.368	.375	.381
Price differential.....	.....	.....	.....	.084	.097	.103	.078	.104	.123	.122	.142	.133
Cheese, New York:												
Whole milk, State.W..	Lb..	.154	.144	.146	.151	.220	.261	.245	.238	.255	.230	.251
Full cream.....R..	Lb..	.....	.....	.229	.228	.301	.313	.335	.328	.340	.344	.344
Price differential.....	.....	.....	.....	.083	.077	.081	.052	.090	.090	.085	.114	.093

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917.					1918	
			1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.
Cheese, San Francisco:												
Fancy.....W..	Lb..	$0.159	$0.125	$0.115	$0.135	$0.180	$0.210	$0.215	$0.200	$0.220	$0.255	$0.255
Full cream.....R..	Lb..	.....	.....	.200	.229	.242	.288	.297	.297	.316	.335	.326
Price differential.....	.....	.....	.....	.085	.094	.062	.078	.082	.097	.096	.080	.071
Milk, Chicago:												
Fresh.....W..	Qt..	.038	.036	.037	.036	.045	.040	.054	.047	.074	.070	.062
Fresh, bottled.....R..	Qt..	.080	.080	.080	.081	.100	.090	.100	.100	.129	.119	.119
Price differential.....	.....	.042	.044	.043	.045	.055	.050	.046	.053	.055	.049	.057
Milk, New York:												
Fresh.....W..	Qt..	.035	.030	.030	.031	.051	.049	.049	.050	.072	.081	.075
Fresh, bottled.....R..	Qt..	.090	.090	.090	.090	.100	.109	.109	.114	.138	.150	.146
Price differential.....	.....	.055	.060	.060	.059	.049	.060	.060	.064	.066	.069	.071
Milk, San Francisco:												
Fresh.....W..	Qt..	.039	.039	.038	.038	.038	.038	.038	.043	.059	.066	.066
Fresh, bottled.....R..	Q..	.100	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121
Price differential.....	.....	.061	.061	.062	.062	.062	.062	.062	.057	.062	.055	.055
Eggs, Chicago:												
Fresh, firsts.....W..	Doz.	.226	.188	.168	.218	.485	.263	.305	.310	.370	.565	.341
Strictly fresh.....R..	Doz.	.292	.261	.248	.296	.525	.323	.376	.406	.469	.651	.407
Price differential.....	.....	.066	.073	.080	.078	.040	.060	.071	.096	.099	.086	.066
Eggs, New York:												
Fresh, firsts.....W..	Doz.	.249	.215	.200	.241	.505	.273	.330	.350	.400	.645	.380
Strictly fresh.....R..	Doz.	.397	.353	.326	.372	.667	.408	.424	.477	.627	.808	.501
Price differential.....	.....	.148	.138	.126	.131	.162	.135	.094	.127	.227	.163	.121
Eggs, San Francisco:												
Fresh.....W..	Doz.	.268	.230	.220	.240	.380	.215	.280	.320	.435	.610	.380
Strictly fresh.....R..	Doz.	.373	.338	.310	.333	.480	.325	.374	.392	.608	.710	.433
Price differential.....	.....	.105	.108	.090	.093	.100	.110	.094	.072	.173	.100	.053
Meal, corn, Chicago:												
Fine.....W..	Lb..	.014	.016	.....	.019	.024	.026	.036	.045	.052	.051	.055
Fine.....R..	Lb..	.029	.028	.031	.031	.042	.047	.050	.058	.071	.070	.071
Price differential.....	.....	.015	.012	.....	.012	.018	.021	.014	.013	.019	.019	.016
Beans, New York:												
Medium, choice....W..	Lb..	.040	.040	.058	.098	.108	.125	.130	.154	.138	.141	.136
Navy, white.....R..	Lb..	.....	.....	.081	.113	.149	.152	.162	.188	.185	.185	.183
Price differential.....	.....	.....	.....	.023	.015	.041	.027	.032	.034	.047	.044	.047
Potatoes, Chicago:												
White[1].....W..	Bu..	.614	1.450	.400	.975	1.750	2.100	2.800	2.625	1.135	1.185	.810
White.....R..	Bu..	.900	1.640	.700	1.356	2.370	2.717	3.455	2.975	1.660	1.680	1.189
Price differential.....	.....	.286	.190	.300	.381	.620	.617	.655	.350	.525	.495	.379
Rice, New Orleans:												
Head.....W..	Lb..	.050	.054	.049	.046	.048	.048	.049	.071	.077	.088	.085
Head.....R..	Lb..	.....	.....	.075	.074	.074	.077	.088	.101	.100	.106	.110
Price differential.....	.....	.....	.....	.026	.028	.026	.029	.039	.030	.023	.018	.025
Sugar, New York:												
Granulated.....W..	Lb..	.043	.042	.059	.075	.066	.069	.081	.074	.082	.073	.073
Granulated.....R..	Lb..	.049	.046	.063	.079	.074	.084	.087	.084	.097	.097	.088
Price differential.....	.....	.006	.004	.004	.004	.008	.015	.006	.010	.015	.024	.015

[1] Good to choice.

Wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table on page 107 A few articles included in the preceding table are omitted from this one, owing to the lack of satisfactory data for 1913. It will be seen from the table that since the beginning of 1917 the retail prices of most of the commodities included in the exhibit have fluctuated at a lower percentage level, as compared with their 1913 base, than have the wholesale prices. This is particularly true of pork, bacon, hams, lard, butter, milk, eggs, and corn meal. For corn meal especially, there has been a much smaller percentage of increase in the retail than in the wholesale price. Comparing March, 1918, prices with the average for 1913, it is seen that only 3 articles of the 25 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are beef in Chicago (two price series) and granulated sugar in New York. In several of the months of 1917 the retail prices of these articles were relatively lower than were the wholesale prices.

While the percentage of increase in retail prices was less than that in wholesale prices for most of the articles, it should be noted that a comparison of the actual prices shown in the preceding table indicates that in the majority of cases the margin between the wholesale and the retail price in March, 1918, was considerably greater than in 1913. The following table shows, for example, that the wholesale price of short clear side bacon increased 124 per cent between 1913 and March, 1918, while the retail price of sliced bacon increased only 67 per cent. The preceding table shows, however, that the difference between the wholesale price of the one and the retail price of the other was 16.7 cents per pound in 1913 and 20.8 cents per pound in March, 1918, or 4.1 cents more at the latter date than at the former. It is also seen that the wholesale price in March, 1918, had increased 15.7 cents over the 1913 price, while the retail price had increased 19.8 cents.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917					1918	
		1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.
Beef, Chicago:											
Steer loin ends (hips)....W..	100	104	95	122	119	119	119	113	140	119	131
Sirloin steak.....R..	100	112	111	121	114	116	126	130	132	130	131
Beef, Chicago:											
Steer rounds, No. 2.....W..	100	111	109	111	92	103	118	130	145	126	130
Round steak.....R..	100	115	113	119	112	115	127	132	135	135	136
Beef, Chicago:											
Steer ribs, No. 2.....W..	100	105	92	111	102	111	134	127	146	127	127
Rib roast.....R..	100	109	109	117	114	111	124	126	127	130	131
Beef, New York:											
No. 2 loins, city.....W..	100	116	108	127	114	123	120	120	174	149	142
Sirloin steak.....R..	100	106	109	114	110	114	123	130	137	133	134
Beef, New York:											
No. 2 rounds, city.....W..	100	112	112	120	107	124	140	145	157	149	157
Round steak.....R..	100	108	109	116	110	117	127	135	145	141	143
Beef, New York:											
No. 2 ribs, city.....W..	100	109	106	119	106	123	132	126	182	156	142
Rib roast.....R..	100	103	104	111	109	117	124	128	137	135	136
Pork, Chicago:											
Loins.....W..	100	111	101	111	111	151	161	168	221	181	168
Chops.....R..	100	107	106	114	119	136	150	154	188	166	163
Pork, New York:											
Loins, western.....W..	100	107	101	109	112	138	155	155	197	174	168
Chops.....R..	100	106	100	110	114	131	147	150	184	160	161
Bacon, Chicago:											
Short clear sides.....W..	100	109	89	125	124	154	172	194	250	237	221
Sliced.....R..	100	108	107	112	107	118	134	149	162	169	167
Hams, Chicago:											
Smoked.....W..	100	105	98	114	113	137	146	146	170	180	183
Smoked, sliced.....R..	100	127	123	131	125	129	144	156	165	161	169
Lard, New York:											
Prime, contract.....W..	100	95	73	121	145	175	195	183	224	224	238
Pure, tub.....R..	100	98	94	105	133	145	164	171	196	206	209
Lamb, Chicago:											
Dressed, round.....W..	100	114	128	128	134	134	148	174	181	161	161
Leg of, yearling.....R..	100	111	105	117	117	126	133	145	159	155	160
Poultry, New York:											
Dressed fowls.....W..	100	103	96	118	121	126	146	136	157	164	188
Dressed hens.....R..	100	103	102	120	122	128	137	134	151	152	.....
Butter, Chicago:											
Creamery, extra.....W..	100	85	85	89	119	129	142	121	140	158	147
Creamery, extra.....R..	100	86	89	93	121	123	134	119	135	150	140
Butter, New York:											
Creamery, extra.....W..	100	87	84	88	122	126	139	122	137	158	145
Creamery, extra.....R..	100	86	88	91	120	123	134	119	135	150	138
Butter, San Francisco:											
Creamery, extra.....W..	100	77	84	80	112	104	123	121	145	167	158
Creamery, extra.....R..	100	85	87	86	110	107	116	117	140	155	146
Milk, Chicago:											
Fresh.....W..	100	95	97	95	118	105	142	124	195	184	163
Fresh, bottled, delivered.R..	100	100	100	101	125	113	125	125	161	149	149
Milk, New York:											
Fresh.....W..	100	86	86	89	146	140	140	143	206	231	214
Fresh, bottled, delivered.R..	100	100	100	100	111	121	121	127	153	167	162
Milk, San Francisco:											
Fresh.....W..	100	100	97	97	97	97	97	110	151	169	169
Fresh, bottled.....R..	100	100	100	100	100	100	100	100	121	121	121
Eggs, Chicago:											
Fresh, firsts.....W..	100	83	74	96	215	116	135	137	164	250	151
Strictly fresh.....R..	100	89	85	101	180	111	129	139	161	223	139
Eggs, New York:											
Fresh, firsts.....W..	100	86	80	97	203	110	133	141	161	259	153
Strictly fresh.....R..	100	89	82	94	168	103	107	120	158	204	126
Eggs, San Francisco:											
Fresh.....W..	100	86	82	90	142	80	105	119	162	228	142
Strictly fresh.....R..	100	91	83	89	129	87	100	105	163	190	116
Meal, corn, Chicago:											
Fine.....W..	100	114	.....	136	171	186	257	321	371	364	393
Fine.....R..	100	97	107	107	145	162	172	200	245	241	245
Potatoes, Chicago:											
White, good to choice....W..	100	236	65	159	285	342	456	428	185	193	132
White.....R..	100	182	78	151	263	302	384	331	184	187	132
Sugar, New York:											
Granulated.....W..	100	98	137	174	153	160	188	172	191	170	170
Granulated.....R..	100	94	129	161	151	171	178	171	198	198	140

MEAT PRICES IN FRANCE.

The following table, taken from the Journal Officiel de la Rèpublique Française for February 25, 1918, shows the wholesale prices for three grades of each of six kinds of meat as reported by the Villette market, for the second week of February, 1918, and for the third week in February, 1914, to 1918, inclusive.

AVERAGE WHOLESALE PRICES OF MEATS AT THE SLAUGHTERHOUSE IN THE VILLETTE MARKET, PARIS, FOR SPECIFIED WEEKS.

Kinds of meat.	Average wholesale prices of meats per pound.					
	Second week in February, 1918.	Third week in February—				
		1918	1917	1916	1915	1914
Ox:						
First grade	$0.313	$0.348	$0.235	$0.215	$0.193	$0.164
Second grade	.296	.326	.226	.203	.184	.147
Third grade	.268	.306	.208	.189	.172	.137
Cow:						
First grade	.313	.348	.235	.215	.193	.165
Second grade	.289	.319	.224	.203	.184	.149
Third grade	.263	.301	.207	.189	.172	.140
Bull:						
First grade	.289	.317	.211	.198	.184	.136
Second grade	.278	.303	.202	.191	.179	.128
Third grade	.261	.284	.191	.180	.170	.123
Veal:						
First grade	.490	.525	.304	.320	.226	.234
Second grade	.433	.473	.260	.280	.208	.214
Third grade	.354	.394	.216	.245	.180	.189
Mutton:						
First grade	.515	.534	.380	.306	.226	.258
Second grade	.459	.494	.354	.271	.208	.235
Third grade	.398	.433	.311	.236	.191	.214
Pork:						
First grade	.484	.490	.313	.298	.189	.143
Second grade	.457	.464	.290	.287	.186	.140
Third grade	.431	.438	.265	.270	.170	.134

COST OF LIVING IN HOLLAND.

The appended table taken from the December issue of the monthly Bulletin of the Dutch Statistical Office [1] gives index numbers of the price movement of some articles of daily consumption in Holland during the months of September, October, and November, 1917, and for the years 1913 to 1916, inclusive:

INDEX NUMBERS OF PRICES OF SELECTED ARTICLES OF DAILY CONSUMPTION IN HOLLAND, 1913 TO 1916, AND SEPTEMBER, OCTOBER, AND NOVEMBER, 1917.

[Prices of 1893=100.]

Article.	1913	1914	1915	1916	1917		
					September.	October.	November.
Cheese	140	139	160	180	233	246	247
Coffee	94	88	91	100	126	126	128
Margarine	127	99	102	110	123	123	125
Butter oil	94	97	130	149	252	300	308
Rape oil	136	137	192	214	323	.....	.....
Starch	103	107	130	157	387	.....	.....
Sugar (moist)	89	91	105	115	116	116	118
Sirup	100	100	125	161	182	182	182
Sugar (refined white)	85	89	98	102	103	103	103
Salt	80	80	90	90	100	100	130
Tea	112	113	116	119	117	117	117

[1] Maandschrift van het Central Bureau voor de Statistiek. The Hague, Dec. 31, 1917.

The figures for coke, putting the average price of eight municipal gas works for the year 1913 at 100, were as follows:

1914	95.58
1915	123.73
1916	152.10
First half of 1917	200.99
July, 1917	230.24
August, 1917	229.80
September, 1917	243.16
October, 1917	243.27
November, 1917	265.45

CHANGES IN THE CHARACTER OF FOOD CONSUMPTION IN SWEDEN.

It is generally known that as prices of certain articles of consumption increase purchasers whose incomes do not increase in like proportion will begin buying articles of a cheaper grade of the same kind, or will substitute others of a different kind lower in price. Thus oleomargarine may be substituted for butter, beans for meat, and mixed breads for wheat bread, to mention only a few. While these facts are generally known, the matter has never been definitely disclosed in any formal investigation because of the difficulties of securing data from the same families at different periods of time—a period of low prices, and a period of high prices.

Such an investigation, however, has now been made by the Swedish labor office [1] at a time when changes of the kind mentioned have been very rapid. In 1913–14 an extended inquiry was made by that office into the cost of living of families of moderate or low earnings. In 1916 a similar inquiry was directed by the Crown. Household account books were distributed in the cities taking part in the former inquiry and were kept by the same families that participated in the earlier investigation. The data secured covered the month of May, 1914, and May, 1916, so as to reflect conditions before and during the War. Twenty-five cities participated in the inquiry. The study included 601 family budgets kept for one month.

The average income per family per week was 35.92 crowns ($9.63) in 1914, and 39.22 crowns ($10.51) in 1916. The average weekly income, however, per unit of consumption—adult 15 or more years of age—had increased only slightly, i. e., from 10.67 crowns ($2.86) to 10.84 ($2.91) because of a corresponding increase in the number in each family and in the average age of the members during the period between the two inquiries. While there was a slight change in average weekly income only about half as many families in 1916 as in

[1] Livsmedelsförbrukningen inom mindre bemedlade hushåll åren 1914 och 1916 av. K. Socialstyrelsen. Stockholm, 1917. 77 pp.

1914 were in the lowest income group—i. e., under 30 crowns ($8.04) a week.

The results of the inquiry show that between May, 1914, and May, 1916, the tendency was to substitute cheaper for dearer articles of food and cereals and vegetables for animal foods. There was a decreased consumption of meat, milk, butter, cheese, and eggs and an increased consumption of fish, oleomargarine, bread, flour, cereals, peas, potatoes, and sugar. For example, rye bread took the place of wheat bread and oleomargarine the place of butter.

In 1914 the average consumption of meat per household was 1,464 grams (3.23 pounds) per week, and in 1916 it was 1,402 grams (3.09 pounds), a decrease of 4.2 per cent per family, but of 11 per cent per unit of consumption. A decreased use of salt or smoked pork per family is shown, i. e., 270 grams (9.5 ounces) per week in 1914 to 211 grams (7.4 ounces) in 1916. Consumption of veal decreased from 249 grams (8.8 ounces) to 194 grams (6.8 ounces) per week.

In 1914 the average quantity of salt herring and codfish used per family was 237 grams (8.37 ounces); in 1916, 298 grams (10.52 ounces), the increase being entirely in the use of salt herring. The increase was equal to 17.1 per cent per unit of consumption.

The consumption of milk decreased 10.3 per cent per unit of consumption, due almost entirely to a decrease in the quantity of whole milk used. The consumption of butter decreased from 634 grams (22.38 ounces) to 483 grams (17.05 ounces), or 23.8 per cent, while the use of oleomargarine increased from 431 grams (15.21 ounces) to 616 grams (21.74 ounces) per week, or 42.9 per cent. Per unit of consumption butter fell off 29.3 per cent and oleomargarine increased 32.8 per cent. The quantity of cheese used per family decreased 26.7 per cent. There was a smaller number of eggs used per family in 1916 than in 1914.

In grains, flour, and bread a considerable increase of consumption is shown. The weekly supply of flour changed from 3,830 grams (8.5 pounds) to 4,982 grams (11 pounds), an increase of 30.1 per cent. The consumption of bread increased 11.5 per cent—4,471 to 4,984 grams (9.86 to 11 pounds). Of the different classes of bread rye flour shows a greater increase in its use than any other, i. e., 15.2 per cent. The consumption of white bread decreased 14.3 per cent, from 441 to 378 grams (15.6 to 13.3 ounces). The use of oats, rice, and other grits and groats increased 19.4 per cent; that of rice alone increased 31.1 per cent.

Calculated per unit of consumption the increase was 21.2 per cent for flour, 3.8 per cent for bread, and 11.5 per cent for groats and grits.

The increase in the use of potatoes is shown to have been 51.8 per cent per family and 41.3 per cent per unit of consumption. The

use of sugar increased 11.4 per cent per family and 3.7 per unit of consumption. Coffee shows a slight increase per family, 9.3 per cent, and 1 per cent per unit of consumption.

Of the total expenses for foods and drinks, proportionately more was spent for food in 1916 (95.16 per cent) than in 1914 (93.92 per cent). Expenses for spirituous liquors formed 2.97 in 1914 and 2.11 per cent in 1916. Meals taken away from home amounted to 2.4 per cent of total spent for food in 1914 and 1.56 per cent in 1916.

The cost of foods served at the home was 15.01 crowns ($4.03) per week in 1914 and 19.73 ($5.29) in 1916, being an increase of 31.4 per cent, while the decrease in the cost of spirituous liquors was 8.3 per cent and in meals away from home 13.2 per cent. The expenditure for tobacco remained practically stationary.

The average expenditures for meat increased during the period from 1.98 crowns (53.1 cents) to 2.70 crowns (53.5 cents) weekly, an increase of 36.4 per cent. The cost for this item was 12.32 per cent of the entire weekly budget in 1914, and 13.04 per cent in 1916. The expenditure for sausage and prepared meats increased by 29.8 per cent, and was 3.51 and 3.57 per cent of the total food budgets of the respective years.

Dairy products, eggs, etc., formed 35.10 per cent and 34.68 per cent of the food budgets in 1914 and 1916, respectively. This decrease was due to a diminished use of high-priced articles—butter, cream, whole milk, cheese, and eggs. The per cent of expenditures increased for skimmed milk (2.17 to 2.32), oleomargarine (3.71 to 5.62), and lard (0.51 to 0.74).

The expenditure for bread changed slightly from 12.34 per cent to 12.29 per cent of the food budget. The expenditure for rye bread, dry and fresh, increased, and for all other classes of bread an approximately equal decrease is noted. Flour formed 6.91 per cent of the budget in 1914, and 8.58 per cent in 1916. The expenditures for this class of foods increased from 1.11 crowns (29.7 cents) per family per week to 1.78 crowns (47.7 cents) or 60.4 per cent. Wheat flour formed about 70 per cent in value of all flour and meal purchased. Oats, rice, and other grits cost 52.4 per cent more per family in 1916 than in 1914.

But little difference is noted in the percentage of expenditures for beans, peas, and other vegetables as compared with the whole food budget. The cost of potatoes, however, increased 69 per cent.

Sugar and molasses and coffee showed a decreased proportion of expense in the budget for the latter year, but an absolute increase, the percentage of increase being 20.6 for sugar and molasses and 14.9 for coffee.

The Swedish labor office continued its investigation into the changes in the dietary of the workingman's family and in the cost of

living, and has presented the results in a recent number of its official journal.[1] During the period May, 1916, to June-July, 1917, changes in food consumption were somewhat different from what they were between 1914 and 1916. Scarcity of certain foods and a system of governmental rationing compelled a limitation in the consumption of the cheaper cereals and vegetables. The consumption of bread, flour, cereals, peas, potatoes, oleomargarine, and sugar decreased, while the consumption of meat, fish, and butter increased considerably, although these were not the cheaper commodities, the principal increase in consumption being of meat and fish. The details as to amounts consumed are set forth in the following table:

AVERAGE QUANTITY OF VARIOUS ARTICLES OF FOOD CONSUMED PER WEEK PER FAMILY MEMBER MAY, 1914, MAY, 1916, AND JUNE-JULY, 1917.

[Sociala Meddelanden, Stockholm, 1917, No. 10, pp. 1190, 1191.]

Item.	Unit of quantity.	Average weekly consumption per family member.		
		May, 1914.	May, 1916.	June-July, 1917.
Number of members in all families		2,412	2,951	2,832
Average number of persons per family		4.55	4.66	4.60
Articles of consumption.				
Meats (all kinds)	Ounce	11.5	11.1	13.5
Fresh meats	do	9.1	9.1	10.1
Beef	do	4.1	4.4	5.8
Veal	do	1.9	1.5	2.0
Mutton	do	.1	1.2	.1
Pork	do	3.0	3.1	2.2
Salt meats	do	2.4	2.0	3.5
Beef	do	.1	.2	.2
Pork	do	2.2	1.8	3.3
Fish:				
Salt herring	do	1.8	2.2	3.1
Cod	do	.2	.2	.4
Milk	Quart	4.0	3.8	4.1
Whole	do	2.8	2.7	3.2
Skimmed	do	1.2	1.1	.9
Butter	Ounce	4.9	3.4	8.0
Oleomargarine	do	3.4	4.7	.....
Cheese	do	2.3	1.7	1.7
Eggs	Number	3.0	3.0	2.0
Bread:				
Rye, hard	Ounce	5.6	6.8	7.4
Rye, soft	do	23.1	23.3	18.1
Wheat	do	4.2	3.5	2.3
Biscuit	do	2.3	2.2	1.0
Flours:	do	28.2	35.4	26.5
Wheat	do	19.9	25.0	13.0
Rye	do	6.9	9.1	12.1
Potato	do	.7	.8	.2
Oat meal	do	.3	.2	.1
Other	do	.4	.3	1.0
Groats and grits	do	4.1	4.9	2.5
Oats	do	2.8	3.4	.7
Rice	do	.8	1.0	1.0
Corn	do	.1	.1	.2
Other	do	.3	.4	.6
Peas	do	.7	1.0	.5
Beans	do	.5	.4	.2
Potatoes	Quart	1.2	1.7	1.1
Sugar	Ounce	12.6	13.8	11.3
Coffee	do	2.5	2.8	1.3

[1] Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm, 1917. No. 10, pp. 1176-1191.

CIVIL REQUISITION IN FRANCE.[1]

A law passed August 3, 1917, provides that during the War certain commodities stored by private persons and by certain classes of establishments are subject to requisition. The classes of commodities and establishments to which the law applies include all articles necessary for food, clothing, light, and heat for the civil population, all materials used and all establishments engaged in producing, manufacturing, handling, or conserving such articles.

No requisition shall be made except upon authority of decrees issued by the council of ministers, which shall determine (1) the nature of the commodity requisitioned, (2) the period allowed for persons having such commodity in storage or in process of manufacture to furnish a declaration, (3) the quantities and materials not subject to declaration or requisition, because of the indispensable needs of the producer during the current season, for seeding, fertilizing, grain or fodder for working animals and for sustenance of the members of the producer's family and his employees engaged in the exploitation of the enterprise, (4) the quantities of commodities not subject to requisition because of their minor importance, and those which will be exempt from all requisition as necessary for the requirements of the family of the holder and persons living with him for the ensuing three months, but such exemptions shall be considered in determining the quantity apportioned the holder in case the population is placed upon rations.

The directors or proprietors of all industrial and commercial establishments of the classes subject to requisition and not in operation are required to make a declaration in so far as it relates to the stock of articles or materials mentioned, regardless of the purpose for which they are held in store.

The authority of requisition is vested in the minister of commerce and industry, upon the proposition of the minister interested. He may delegate his authority to commissions presided over by the prefects.

Written notice of requisition is served by civil authorities upon the holders, operators, or proprietors.

Persons upon whom requisition shall be illegally enforced may enter protest, and the issue may be determined by summary proceedings in a civil court of last resort. The court may declare the writ null and allow pecuniary damages.

Notwithstanding the fact that a protest is made, all requisitions are immediately enforcible, and no court shall suspend an execution unless after a hearing the requisition is annulled.

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[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale. Nos. 10-12, October to December, 1917. Paris.

Industrial and commercial establishments may be requisitioned in whole or in part. In case of partial requisition, if the operator agrees to conduct production or manufacture of commodities as required by the minister of commerce, under conditions imposed by him, the requisition is immediately canceled. In case of the requisition of an entire establishment, its operation is conducted on the account of the State, even when at the request of the operator he may be permitted to direct its operations.

Before taking possession of any establishment requisitioned, an inventory of the plant, materials, stock, and merchandise must be taken in the presence of the operator or proprietor, who shall be duly notified, and an expert appointed by agreement between the minister of commerce and the interested party, or in default of agreement by the president of the civil court as referee. Statements made by the operator or proprietor and by the expert shall be made a matter of record.

A commission to which one industrial operator, one merchant, and one member of the chamber of commerce shall be appointed, shall decide the amount of indemnity payable in case of requisition. The minister shall also appoint a president, who shall vote only when there is a parity of votes. The operator or proprietor may appeal from the award.

The same method of procedure is followed when products are requisitioned. Awards are payable within 15 days, or thereafter draw interest at the legal rate.

Penalties are provided for failure to furnish declaration, and for preparing fraudulent, etc., declarations; and requisition of commodities not declared may be ordered.

RECENT LABOR AWARDS.

LABOR AWARD IN PACKING-HOUSE INDUSTRIES.

The following arbitration wage award issued by the United States administrator, Samuel Alschuler, in the packing-house industries is of significance and importance not only because of the decisions rendered but especially because of the argument upon which these decisions were based. With the exception of the wage demand, substantially everything asked for by the employees was granted by the arbitrator. This included the important demand for a basic eight-hour day. The eight-hour demand was granted upon economic and social grounds. The wage increases were determined with reference to the cost of living, although the arbitrator stated that in arriving at these increases he was influenced by the probability of overtime work. The lower paid employees, however, were granted not only a higher relative increase, but also a higher absolute increase.

Following is the text of the award in full:

IN THE MATTER OF THE ARBITRATION OF SIX QUESTIONS CONCERNING WAGES, HOURS, AND CONDITIONS OF LABOR IN CERTAIN PACKING-HOUSE INDUSTRIES, BY AGREEMENT SUBMITTED FOR DECISION TO A UNITED STATES ADMINISTRATOR.

In pursuance of agreements made with the President's Mediation Commission, in December, 1917, and later supplemented,[1] whereunder a United States administrator was constituted to adjust differences between certain large employers in the packing-house industry and their employees respecting wages, hours, and conditions of employment, 18 questions were submitted for immediate arbitration by the administrator. Through subsequent negotiations between those concerned 12 of these questions were settled by agreement, and as so agreed upon are appended hereto for reference. The six remaining questions, in the form of propositions, constituting the demands by the employees, are as follows:

1. Eight hours shall constitute the basic workday, and such workday shall be completed, in so far as possible, within a period of not more than nine consecutive hours.

2. Overtime work shall be paid for at the following rates: Double time for all time worked on Sundays and holidays, including New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, or the days legally celebrated in lieu thereof; time and one-half for all time worked upon week days in excess of the regular eight-hour workday.

3. Where plants are operated three eight-hour shifts daily, employees shall be allowed 20 minutes off with pay, for lunch.

[1] See MONTHLY REVIEW for March, 1918, p. 59.

4. January 1, 1918, wages shall be increased as follows: For all hourly rate workers, $1 per day increase over amount paid December 31, 1917, to employees in the same classification for 10-hour day; for all pieceworkers, a percentage increase equal to that applied to hourly rates in the same classification.

5. Wage rates shall be the same for male and female employees doing the same class of work.

6. There shall be no change made in the guaranteed time in effect November 30, 1917.

The plants involved are those of Armour & Co., The Cudahy Packing Co., Morris & Co., Swift & Co., and Wilson & Co., one or more of whom have packing plants at one or more of these cities: Chicago, Kansas City, Sioux City, St. Joseph, St. Louis, East St. Louis, Denver, Oklahoma City, St. Paul, Omaha, and Fort Worth.

The hearing for arbitration of these six questions began before me last February 11, and continued until March 7, during and since which period the matter has had my constant attention. It is to be regretted that the exigencies of the situation do not admit of many months of further research and study which the importance of the main questions involved, in principle and in consequences, would well have justified.

If earnest devotion to the grave duty thus devolved on me could alone give assurance of the excellence of the outcome, I would have no concern regarding it; but profoundly conscious of my own limitations, I can only trust that good intent may be so far furthered by good fortune that the award may at least fairly approximate justice to all so deeply and alike concerned in it—employers, employees, and the public.

The award proper will be premised by a statement as brief as I can well make it, of reasons for my conclusions.

From the stock pens to the finished product there are many operations in this industry, involving numerous classifications of the labor with varying wage rates. The employees in all the plants are mostly men. The female employees are more numerous in those few of the plants in which much canning is done. The far larger proportions of the employees work on an hourly wage, a comparatively small number working on the piecework plan. Of the male employees of the various plants considerably more than half are what may be termed common laborers—being the men now paid the hourly wage of 27½ cents.

Since the occurrence in 1904 of a strike at the Chicago plants, which resulted in the complete defeat of the employees and their organizations, wage rates remained for about 12 years practically unchanged, save perhaps for some reduction in case of the common laborers, who theretofore were receiving about 18 cents per hour. The sharp and progressive advance in living costs, beginning shortly after the commencement of the War in Europe in 1914, brought about some raise in pay in March, 1916, which operated to equalize as to the different plants the wages of the common laborers who thereafter in all of them were paid 20 cents. The subsequent raises in the hourly pay of all employees were: October, 1916, 2½ cents; April, 1917, 2½ cents; September, 1917, 2½ cents. Pieceworkers were given this hourly wage for the time employed, in addition to their piecework earnings.

The industry is of a quite seasonal nature, mainly because of larger stock shipments during the cold weather months. Mr. O'Hern, general superintendent of the Armour plants, stated that for two-thirds of the year the plants are not worked 50 per cent of full capacity. The number of employees varies greatly in different seasons, and the daily hours vary greatly not only for the different seasons, but often in the same season.

The employers seem to regard this as a 10-hour day industry, but in practice the hours of daily work are greater or less than 10, as best suits the needs or convenience of the particular operation or plant. Figures submitted for one of the largest of the concerns show that the average hours worked by the large number of employees in what is

known as the killing gangs, for a period of over a year next preceding the ninth day of the present month, were about 50 hours per week. In one of the other plants it was considerably less, and in still another somewhat more. In most of the other packing employments more daily hours were quite generally served in that period; but even in these, it appears the daily work hours have been quite irregular, being at times much under 10 hours, and at other times, for protracted periods, far in excess. Eleven, 12 and 13 hours daily are exceedingly common, and 14 and 15, and even more hours daily for a number of days, not unusual, and Sunday work very frequent. The average laborer in this industry, who, in the course of this last busy year, received for his work an aggregate pay equal to 10 hours daily at his prevailing hourly rate, for 300 days, would probably have worked many days far less than the 10 hours, and many other days far in excess. In the case of women employees excess time is generally prevented by statutory maximum time limits, this being in some of the States where there are plants, 9 hours—in Illinois, 10.

The employers could consult their own convenience in the matter of overtime, since there has been no advanced rate for time beyond 10 hours, save in those few employments wherein they have made trade-union agreements, viz., printers, masons, and teamsters, aside from which employments, it appears there have been no trades-union agreements in these establishments since the strike of 1904.

For a number of years there has been in force a guaranteed pay system, whereunder employees, while on the pay roll and ready for duty, are guaranteed a certain weekly minimum wage—40 hours—in all of the plants, except Swift's, in which it is 45. No higher wage rate has been paid for Sunday and holiday work.

Employments which in their nature are continuous, such as heating and power plant work, are conducted by two 12-hour daily shifts working seven days weekly.

The general nature of the work in packing houses is too well understood to require description. The common laborer's work does not involve any considerable degree of skill, but is generally laborious and heavy. In the very extensive canning operations and in some of the others the employees are largely women, whose work appears to be of a nature lighter than that of the men, and whose hourly wage is materially less.

The building and shop trades are also represented on the pay rolls—carpenters, machinists, plumbers, steam fitters, electricians, coopers, and others. The daily work hours of these employees are perhaps more regular, and work generally limited to 10.

Very many of the employees are Poles, Lithuanians, Russians and of kindred origin, unversed in the English language, and many of them are colored. No very substantial difference in conditions was pointed as to the plants in the different cities. In some of them there are fewer foreigners than in others; some variance in proportion of colored employees, and of the sexes, and some difference in different localities in prevailing wage rates.

The much greater part of the current output of these plants must be put into suitable form for use by our soldiers and sailors and our allies. This involves the preparation of a vast quantity of canned product, far in excess of what was theretofore made, and the consequent employment of a great many more persons in the canning and related departments than in normal times. It is of prime importance that there be no diminution in this output. Indeed, one of the stipulated purposes of constituting this administration is that there may be no interruption, cessation or curtailment in the supplies, and services of the companies essential to the successful prosecution of the War and military activities of the Government. Far, indeed, from curtailment of output, it should, if necessity require, be increased, if this can be done without, through overwork, impairing the efficiency of the employees, and rendering them less capable of even maintaining present output.

While we fondly hope that the war may be brought to a speedy end, and with complete triumph of our cause, we are confronted with the possibility that it may be long protracted, in which event the continued strength, confidence, and good spirit of our defenders and of our allies will be very materially dependent upon the continuous uninterrupted and dependable movement of supplies from our country, and largely from this industry. We must, therefore, look forward, not to spasmodic and temporary spurts of larger production, but to the long and the steady pull under the strain of which the strength and spirit and efficiency of the workers will likewise be continuously assured, and the productivity of the industry steadily and reliably maintained. This is of vital moment to us all, and particularly to the workers of our land, for if through dire mischance this war be lost to us, and we become a vassal Nation, dominated by a foreign military autocracy, the eight-hour day, the living wage, and all the economic advances in labor conditions here achieved or in process of achievement would disappear—relegated to a time so far away that no one living would likely endure to realize them. Work hours would be to the very limit of daily human endurance, and the wage the merest pittance sufficing for miserable hand-to-mouth existence. Democracy, the hope of all men who believe in equality of right and opportunity, would indeed "perish from the earth."

1. THE BASIC EIGHT-HOUR DAY.

Assuming this to be a 10-hour industry in the sense that 10 hours is considered the time of daily service within which the employee shall earn a livelihood for himself and family, the demand is that this time be reduced to eight hours. Primarily, there is involved the economic soundness and wisdom of the principle of the eight-hour day as the normal day's work for normal men and women under normal conditions; for if not a sound proposition under normal conditions, it would surely be unsound in our present situation.

Economists, sociologists, philanthropists, and publicists are quite generally favorable to the eight-hour workday, as being most conducive to the welfare of employers, employees, and the community, and it would serve no beneficial purpose here to multiply words in detailing and arguing the reasons they assign therefor beyond stating the general propositions—sanctioned, I believe, by reason, and justified by experience—that longer daily hours in most factory employments tend to induce undue strain and fatigue, to reduce the vitality of the employee, with tendency to irritability, listlessness, and carelessness, and to diminution of industrial efficiency, and consequently less productivity, not only for the overtime worked but for the working days; that the workman, strained and fatigued by too long hours of work, is more prone to seek comfort in the excessive use of stimulants and other harmful indulgences; that the eight-hour day gives opportunity for due recreation and rest, for concourse with family and friends, and for self-improvement, making the happier, healthier, more contented employee, ready day by day, with good will and vigor, to give the best that is in him to his work, producing greater and better results, pleasing at the same time his employer and himself, and generating far better understanding and feeling between them; that the longer exemption from factory toil will broaden his vision, tend to his moral development, and to inspire ambition for better things—better living conditions, larger conception of our institutions, particularly on the part of the non-English speaking foreign-born employees, fitting all for better citizenship and a higher appreciation of its privileges and duties; that it will tend to dignify the labor itself, making it seem, as in truth it is, worthy and proper to be undertaken by poor or rich, foreign or native, educated or ignorant. If but modest part of such benefits are fairly to be anticipated from the shorter workday, it should not be delayed longer than reasonably necessary to institute it.

The public policy of the eight-hour workday has been given oft-repeated sanction by legislation in the majority of the States as well as by Congress, through enactments of various kinds too numerous for specific mention. In a message to Congress in August, 1916, our President stated: "It seemed to me that the whole spirit of the time and the preponderance of evidence in recent economic experience spoke for the eight-hour day. It has been adjudged by the thought and experience of recent years a thing upon which society is justified in insisting as in the interest of health, efficiency, contentment, and a general increase in economic vigor." The President's Mediation Commission in its unanimous report of last January 9 declared, "The eight-hour day is an established policy of the country."

The voluminous evidence adduced at the hearing in support of the contention for the eight-hour day is in the main logical and convincing, and it is particularly to be noted that in so far as concerns the general principle of the eight-hour day no evidence to dispute it was presented. Indeed on behalf of the employers it was repeatedly, openly, and frankly, admitted that a workday shorter than the 10-hour day was desirable, and on behalf of the employers and in the presence of their superintendents it was freely stated that they all believed in a shorter workday; that they had said so, and that there was no room for argument about it. Mr. O'Hern stated that they saw the eight-hour movement coming, and that his concern had prepared plans involving millions of dollars for the construction of additional equipment for the purpose of meeting it; and it was likewise stated for them that after the War is over the packers would themselves probably put the plants on an eight-hour day, and that the only question for the administrator respecting the eight-hour day was as to the wisdom and advisability of installing it while we are at war.

For the employers the contention was earnestly pressed, and much evidence was adduced in support, that the plants were now constructed with a view to the 10-hour day; that equipment and capacities were arranged with reference to such a day, and that to make the necessary change for equipping the plants to be run on the 8-hour day would entail vast structural changes and additions that would require perhaps two years to install, even though materials and labor were now available. It was maintained that these plants are running largely to their full capacity in making the vast meat products required by the Government for supplying our soldiers and sailors, and our allies, and that if now they were placed on an actual 8-hour basis it would reduce their output by at least 20 per cent. It was pointed out that the plants, except Armour's Chicago plant, could not run two 8-hour killing shifts largely because of insufficiency of rendering tanks and cooling space. It was urged that the docks for loading cars, mainly at the Chicago plants, were insufficient to take care of a larger output than at present; also that the killing rate as to hogs had to be slowed down on demand of the inspection authorities; and there were other difficulties suggested. All of them I do not deem it necessary to consider in detail. If more rendering tanks were necessary to accommodate two killing shifts, if required, I believe they would be speedily forthcoming. Greater cooling space would doubtless require considerable time to install, but the evidence shows that in the years gone by, at times the daily kill at Chicago was considerably larger than even nowadays, and the cooling space, not greater then than now, was sufficient. It is my judgment that the cooling space is very infrequently taxed to its maximum, and would generally take care of a considerably larger kill than is customary even in the busy season. Unloading facilities would, I am sure, be readily accommodated to needs; and as to inspection, it is not likely that this function, maintained by the Government, would be permitted to retard or impede compliance with the Government's demands upon these plants. If this industry were suddenly to pass from long-existing conditions to the actual eight-hour day, undoubtedly for a time there would be more or less confusion and embarrassment, with a probable slowing up of production as against the present maximum. But I do not

believe this would last long, but on the contrary, that the industry would adjust itself to the new conditions, and the same force of employees would become quite as effective as before to keep up the output, not to mention the employment of more if necessary. Such results, well exemplified in other institutions which have adopted the actual eight-hour day, the superintendents seem to have entirely omitted from their calculations, in concluding that merely because 20 per cent was taken from the workday of the present force it would entail a like percentage of reduction in output.

So even if the actual eight-hour workday were imposed upon this industry, I feel abundantly assured that before very long, such would be the increased productivity of the employees, supplemented if need be by some further equipment, and some additional help, that there would be no diminution in the output. But if the confident predictions of enthusiastic partisans of the eight-hour day, in respect to the greater productivity of employees, should fail of substantial realization, I would yet feel confident that the genius and ability of the men, who are in effective and successful charge of these great plants, would soon adjust them to the new order of things without lessening the output.

The demand, however, is not for the actual eight-hour day but a basic eight-hour day. The distinction is apparent. The one fixes the ultimate hours of work; the other defines and fixes the normal workday within which the wage earner should earn his living, with right to require service for further time if the exigencies of the industry demand. Under the agreement referred to wherein employers and employees alike loyally and patriotically pledged themselves to the uninterrupted operation of the plants and an undiminished output, it is plain whatever the basic day may be, employers may in good faith require, and employees will cheerfully and to the limit of their ability render, any further service calculated to assure our Government and our allies an undiminished meat supply, to the very ultimate capacity of the plants. Indeed, on the hearing, all the superintendents declared, in that same good spirit of loyalty, that notwithstanding the difficulties they believed were in the way of adopting the eight-hour workday during the continuance of the War they would, if required, conform to the basic eight-hour day, whatever the added inconvenience and cost, without diminishing the output of the plants.

In the recent Federal legislation making provision for further hours of service in its many and varied industries theretofore limited to an actual eight-hour day, and in the proclamations for authorizing such further hours of service, the Government did not impeach the principle, nor abandon the practice of the eight-hour day, but, foreseeing the possibility of extraordinary contingencies in these extraordinary times, it made provision to meet them by changing the actual eight-hour day to a basic eight-hour day with increased pay for overtime. The Mediation Commission in its report above referred to said further that "experience has proved justification of its principle also in war times."

It is my belief that we can not go far astray in applying to this essential and basic war industry substantially the declared and practiced policy of the Government with respect to its industrial functions. I am well convinced that the basic eight-hour day, applied to these plants, will make more contented, useful, and effective workers, better and truer Americans, and will redound to the material and moral interest of employers, employees, and the public; and I find in principle for the demand to have concrete application as hereinafter indicated.

As to employments which are continuous during the 24 hours, and in which it has long been customary to employ two 12-hour shifts, it was stated on behalf of the packers at the time of the hearing that this should and would be converted into three 8-hour shifts, and I am of the opinion that this should be done.

That part of this demand which refers to the serving of the eight hours in nine consecutive hours is reasonable and is usual where labor hours are fixed, to prevent

inconvenience and hardship by dividing the workday into various parts, which, while aggregating no more than the total workday hours, might have to be served in remote parts of the 24 hours.

It is readily conceivable that so material a change in the plan of service in these large concerns will entail much thought and planning on the part of those in charge to avoid undue waste and the least embarrassment for all concerned, and had it been possible to have made the decision at the time of my appointment as administrator, in February, I would probably have fixed about 90 days in which to install the basic eight-hour day pending which there should be in practical effect a basic ten-hour day. But I must assume that these careful and efficient superintendents, together with their competent aids and superiors, have not been wholly unmindful of the possibilities of these proceedings, and have already given the matter some thought and study. Feeling that it would not be just to employers to be required immediately to make this change, nor to the employees to delay too long its installation I have fixed upon May 5, 1918, as the date upon which the basic eight-hour day shall begin.

2. COMPENSATION FOR SUNDAYS AND HOLIDAYS AND WEEK-DAY OVERTIME.

As to the fairness of the demand for a higher rate of compensation for Sundays, holidays, and week-day overtime there was no controversy at the hearing, but it was frankly conceded by such of the packers who testified, and by all of the superintendents. In testifying before the United States Commission on Industrial Relations about three years ago Mr. O'Hern, referring to the result of overtime work, said, "we do not get the results in overtime nor do we have men working as efficiently." While presumably he was referring to overtime beyond 10 hours, it would of course have application to the true economic day's work whatever it may be, and it is likewise true that if the overtime beyond the economic day's work is continued on successive days for any considerable time, the impaired results of the labor, and the inefficiency of the laborer would not be limited to the overtime itself, but be reflected in the entire day's work as well. The higher rate serves to deter employers from unnecessarily requiring employees to work at such times; but if such work is necessary it serves also to compensate the employee for the added sacrifice he makes in so working at times when he should have his liberty.

As to the particular holidays there was some contrariety of view, and likewise as to the amount of the extra pay for Sundays and holidays. It is my judgment that double time should be allowed for work on Sundays, and on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Where any operation is continuous in three eight-hour shifts, I do not believe extra pay for Sunday should be allowed if provision is made for relieving the employee from work on some other day of the week.

As to overtime pay for weekdays, the employers, while conceding the general fairness of the principle, contend that the overtime should be allowed for the excess of hours served in the week. That is, if the basic day were 10 hours, excess time should be allowed only if in the week over 60 hours were served. This system is in vogue in many industries, but I do not think it tends so well to serve the purpose of minimizing the daily hours, or rather of equalizing them from day to day, as would the daily application of the principle. If with the eight-hour day the employers may with immunity work the employees 16 hours daily for three days of the week, and not at all for the others, they might regulate their stock purchases and holdings accordingly, whereas if the added pay for overtime applied to the days, they would be more likely to make effort to conform to the eight-hour day, as it would probably be more to their advantage to carry over some of the stock for another day or two than to pay the added rate for overtime.

The most usual and customary rate for weekday overtime is time and one-half, and as to such time served beyond 10 hours I have no hesitancy in fixing that rate, I am convinced, however, that for a very considerable time after the basic eight-hour day becomes effective, at least until employers and employees have become adjusted to the new conditions, it will from time to time be necessary to serve some overtime. In view of this fact I do not believe it would be fair, at least until long enough after the basic eight-hour workday becomes effective to determine more definitely from experience in this industry, to impose on the first two hours so large a penalty as for the excess over 10 hours; and I have accordingly concluded that on and after next May 5 for the first two hours of week day overtime the rate of compensation shall be time and one-fourth.

As to the week day overtime rate for the time intervening between January 14 1918 (on and after which date the said arbitration agreement is by its terms effective), until said May 5, when the basic eight-hour day becomes operative, week day time in excess of 10 hours daily shall be compensated at the rate of time and one-half, and Sundays double time.

3. ALLOWANCE OF 20 MINUTES FOR LUNCH WHERE OPERATION IS BY THREE EIGHT-HOUR SHIFTS.

This demand was not resisted by the employers, and it appearing reasonable is granted.

4. INCREASE IN WAGES.

With the installation of the eight-hour workday following the theretofore 10-hour day, there naturally goes adjustment of the hourly and piecework wage rate so that in the full eight-hour workday there is earned an amount equal to that theretofore earned in the full 10-hour workday. The evidence for the employees and employers as well, is unanimous to the effect that whatever the economic workday is found to be it should under normal conditions afford to the workman a day's living wage for himself and family of average size, generally considered to be wife and three children of about school age. The proposition itself is too clear to require elaboration. The superintendents agreed that while so-called market price of labor, as evidenced by what other industries pay for it, should have some influence, yet in any event it should be a living wage.

While it might seem that the term "living wage" should itself fix its boundaries and convey its significance, it is one of those phrases not capable of exact definition, but is quite dependent on the viewpoint of the one who employs it. While it might generally be understood to be a wage affording a living suited to one's condition in life, it could hardly be said that if because of an unreasonably low wage the condition in life of the employee sinks low, but that his family manages to subsist thereon, that the condition in life of this family is thereby established, and that the wage paid is suited thereto. A living wage surely imports something more than this. On the other hand, the common laborer's living wage can not under the existing order of things be said to include extravagances and superfluities which only those of large means can afford. On behalf of the employees various so-called "living budgets" were presented. With the best of intent these must, it seems to me, reflect more or less the point of view of those who gathered the data or those who compiled them. Where they are made from observations of what a given number of families has actually required to maintain them, they may not afford just guide for those families whose earnings are customarily sufficient to warrant better living, or for families whose earnings were unduly low but which nevertheless have been compelled to subsist thereon, deprived of many things which they ought to have had but could not for lack of means procure. As to whether or not the man with the low wage has been

compelled unduly to so deprive himself and his family, and if so to what extent, affords room for wide divergence of opinion depending in large measure upon the personal views and experiences of those who make or interpret the budgets. Those used to better living might include more, and those not so accustomed less. The budgets presented at the hearing varied from about $800 to about $2,000. While budgets are helpful, there is difficulty in reconciling them to each other, and to the actual conditions with which we have to deal.

That the cost of living, from the humblest to the highest, has greatly and progressively increased since shortly after the War in Europe began to the present time is too well known to require more than the statement. Price tables may with some approximation convey an idea of percentages, but we know that it is the common and most generally used articles which have increased most in price. I shall not undertake to prescribe a specific living budget for workingmen, nor to indicate with mathematical exactness the percentage of increased living costs for the average workingman's family, as between the present time and some supposedly normal period when the wages received might have been considered adequate—if indeed as to some of these employees such time there was. The raises given the employees in the last two years have been considerable, but at least in the case of the laboring men they supplemented a wage rate which in my judgment was for a considerable time before any of these raises, quite inadequate.

If the 10-hour workman receiving 27½ cents per hour, or the eight-hour workman at correspondingly increased rate worked 300 days a year, his wages would be $825. I have no hesitation in saying that I do not believe under existing conditions this sum is adequate to the ordinary needs of the average workingman's family in the cities involved. It should be materially increased, and in my judgment there should be a similar increase for all those employees whose wages are lower and even somewhat above that rate, and an increase, though not so much, for all those whose wages are considerably more. This distinction is, I believe, warranted from the fact that those receiving the higher wages do not stand so greatly in need of the increase as the lower rated workers, because with their far higher rate they are much better provided, although their plane of living is no doubt higher. Such of these more skilled workmen whose average day's work has been nearer eight hours than 10 will of course profit more from the eight-hour day rate, and of course, when the basic eight-hour day is in force where overtime is worked the earnings therefor will supplement their incomes, as well, to be sure, as the income of the others so working overtime.

In fixing the rates of increase, as well as in the overtime rate, I feel that it is my duty to take into consideration the likelihood that under present conditions overtime will be served. While this is my best judgment, experience alone must determine how material a factor this will prove. A well-known economist and statistician, testifying for the employees, stated that while it was his belief that overtime work would be unnecessary to maintain the output, if the administrator was satisfied that for any material time it would be necessary, it would only be fair for him to take this into consideration in fixing overtime rates and wage increases.

We are not here met, as is frequently the case in wage fixing, with the ofttimes embarrassing and influential contention that the profits of the industry will not warrant the demanded hours or wages; or that the highly competitive nature of the business would forbid the change except at ruinous cost; or that prices and income are so fixed by law or otherwise that until there is possibility of change in that regard the change in hours or wages would prove destructive to the employer. It has at no time been suggested in these proceedings that from the standpoint of income or profits the industry can not afford to meet the demands. This would not of course warrant the granting of wage demands which are not fair and just. If increased cost through change of hours or advance in wages is not wholly or in part absorbed through appli-

cation thereon of a proportion of the profits which employees are so indispensable a factor in creating, so much of the increased cost not so met would doubtless be reflected in the price charged for the product. The administrator is not constituted to pass on profits nor prices. If industrial profit sharing, as notably in the Henry Ford industries, is to be inaugurated in this industry, in due time it may come through voluntary cooperation of employers and employees.

So far as I have been advised or know, there is no scientific method for accurate wage fixing. In view of all the facts and conditions, I can only exercise my best judgment, and so guided, I have concluded that beginning January 14, 1918, the wage rates shall be increased over those in force December 31, 1917, by adding 4½ cents an hour to the pay of all employees then receiving up to and including 30 cents per hour, 4 cents per hour to those then receiving from 30 cents up to and including 40 cents per hour, and 3½ cents per hour to all those receiving over 40 cents per hour, piecework rates to be adjusted in like proportion according to earnings; that on and after May 5, 1918, when the basic eight-hour day takes effect, the increased hourly wage rates then in force shall be readjusted, so that thereafter the full eight-hour day shall yield the same wage to the employee as did the 10-hour day immediately theretofore, and that piecework rates be readjusted on like principle.

5. EQUALITY OF WAGE RATES FOR MALE AND FEMALE EMPLOYEES.

There was no controversy regarding the principle which this proposition involves. It was conceded, and is right, and is therefore allowed.

But the employers maintain that where males and females are doing the same class of work they are in fact paid the same wage. The evidence shows this to be so in piecework, wherein it clearly appears that the same rate is paid to both, for the same kind of work. There was some contrariety of evidence as to whether in the hourly wage employments males and females were employed in the same kind of work. The superintendents stoutly maintained that the work done by females is of the lighter class, which would ordinarily not require the services of a man, but was such as boys of 16 and over might ordinarily be employed to do, at a lower rate of wage. The preponderance of the evidence in my judgment sustains the contention that in the main this now is the practice in this industry, and I conclude generally that the evidence so shows. It was stated by some of the superintendents that occasionally in workrooms where there are both male and female employees, if for an hour or so or even somewhat longer there is no work for a male employee in the particular heavier work at which he is customarily engaged, he may turn in and help on the lighter work of the female employees, although he would continue to receive his usual larger wage. The evidence shows this to be an occasional happening, and in my judgment it would not vary the general conclusion that the evidence did not show male and female employees to be doing the same class of work in the hourly-pay jobs.

6. GUARANTEED TIME.

The demand is that there be no change in the guaranteed time. It is contended for the employers that the existing guaranteed time, being predicated on a 10-hour day, if the basic day is less than 10 hours, the guaranteed time should be correspondingly reduced. I do not agree with this contention. The guaranteed time is weekly and, of course, the employer would have the benefit of any overtime that may be served. I believe that under all the circumstances it is reasonable. But if the plants are to be run so near their full capacity as the superintendents seem to think, the question of guaranteed time will be of slight importance. There should be some adjustment so that the generally prevailing 40-hours-weekly guaranty will apply to all of the plants. The existing 45-hour guaranty of Swift & Co. is entirely too close to a 48-hour week at the new basic-day schedule to be wholly fair. There should

also be some change in the guaranty as to those weeks in which any one of the stated holidays occurs; otherwise the guaranteed time would equal the basic-day hours for the rest of the week. It is my judgment that as to employees who do not work on such holidays the guaranteed time for the week in which it occurs be 33½ hours.

On argument it was earnestly insisted that if a basic day shorter than 10 hours were fixed upon, it should have application only to those in the skilled trades and occupations, the assigned reason being that in some of the operations, particularly on the killing floors, the laboring men must of necessity serve after many of the skilled workers have completed their day's tasks, in order to complete the work. If all of the workers began and quit at the same hour, there would likely be embarrassment from this situation, necessitating a shorter day's work on the part of some of the skilled workers or a longer day's work for these laborers. I believe this may be obviated by having some of the laborers begin work a little later, or even if necessary, working overtime by different ones of the laborers on different days, until some better plan can be evolved by those whom I firmly believe to be fully capable of working it out. But it seems to me that in any event the embarrassment incident to such a situation would be slight compared with that which would result from the great dissatisfaction that would undoubtedly follow if the major part of the men were excepted from the application and benefits of the shorter day. It is these very common laborers who stand most in need of it. It is these who in Chicago largely live in great numbers in that unlivable section of the city known as "Back of the Yards," many of them in habitations and in conditions in which human beings should not be permitted to remain. Whether this is of choice or of necessity, the shorter workday will have tendency to elevate the choice, and relieve the necessity. I do not believe it would be wise or just to make the exception.

In conformity with these views I make the following award:

1. Beginning May 5, 1918, and thereafter, eight hours shall constitute the basic workday, and such workday shall be completed, in so far as possible, within a period of not more than nine consecutive hours.

Those operations which are continuous during the 24 hours shall on and after said date be conducted by three shifts of eight hours each.

2. Overtime work shall be paid for at the following rates: Double time for all time worked on Sundays and holidays, including New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, or the days legally celebrated in lieu thereof. Where the operation is necessarily and generally carried on for seven days of the week, provision may be made by relief gangs or otherwise, so that the employees in such operations may be relieved from duty on some day of the week, and in case of such relief on any other day of the week double time shall not be allowed for work on Sunday of such week.

On and after the induction of the basic eight-hour day as above provided, the week-day overtime pay (not including any day for which double time is paid) shall be at the rate of time and one-fourth for the first two hours in excess of the regular eight-hour day on each such day and at the rate of time and one-half for all time thereafter on each such day. For the time commencing on and intervening between January 14, 1918, and until such induction of the basic eight-hour day as above provided such week-day overtime pay shall be at the rate of time and one-half for all time in excess of 10 hours of work on any such day, and Sundays double time.

3. Where plants or any part thereof are operated on three eight-hour shifts daily employees shall be allowed 20 minutes off for lunch with pay.

4. Wages shall be increased as follows: Predicated on the hourly wage rate in force December 31, 1917, 4½ cents per hour to such employees as were then being paid at the rate of 30 cents and under per hour; 4 cents per hour to such employees as were then being paid from 30 cents up to and including 40 cents per hour; and 3½ cents per

hour to such employees then being paid at the rate of over 40 cents per hour. For all pieceworkers there shall be a percentage of increase equal to that applied to hourly rates in the same classification. All these increases shall be effective as of January 14, 1918. Upon the induction of the basic eight-hour day as aforesaid, the hourly wage rates shall be readjusted so that thenceforth the compensation for a full eight-hour workday shall be equal to the compensation immediately theretofore for a full 10-hour workday at the increased wage rates above fixed; and piecework rates shall be proportionally readjusted in accordance with the same principle.

5. Wage rates shall be the same for male and female employees doing the same class of work.

6. There shall be no change made in the guaranteed time in effect November 30, 1917, except that the weekly guaranteed time in the plants of Swift & Co. shall be 40 hours, the same as in all the other plants; and except also in those weeks wherein any one of the above-named holidays occurs the guaranteed time of such employees as do not work on any such holiday shall for such week be 33½ hours.

SAMUEL ALSCHULER, *Administrator.*

CHICAGO, ILL., *March 30, 1918.*

AGREEMENT.

1. Should an employee, or employees, feel that they have been unjustly dealt with the matter may at once be taken up with the foreman. Should a satisfactory adjustment not be made, the affected person or persons may appeal the matter through the proper officials up to the general manager of the companies. Such appeal may be made in person or by representative, or representatives, selected by the affected employee or employees.

It being understood that there shall be no permanent person or committee on complaints or grievances in the plants, but such employee or employees have the full right to name the same representative or representatives for successive complaints or grievances if they see fit to do so.

Such complaints shall be made during working hours at a convenient time and place and disposed of without unnecessary delay.

All complaints growing out of dismissals from the service must be made within five days.

2. No employee covered by this agreement shall be suspended, demoted, or dismissed without just and sufficient cause. If, after proper investigation, it is found that an employee has been disciplined unjustly he shall be reinstated with such rights and such compensation as the arbitrator may determine.

3. No employee shall be suspended, demoted, or dismissed because of trade-union membership or for trade-union activity not carried on at the premises nor interfering with the operation of the plant.

4. Employees attending conventions or other duties affecting themselves shall upon giving proper notice to the foreman or superintendent be permitted to absent themselves without pay to attend to such duties in the same manner as workers attending to the duties of fraternal organizations, so long as such absence from the plant does not unduly interfere with the operations of the plant. Upon their return such workers shall be reinstated into the service with all their former rights.

5. There shall be no discrimination against any employee or prospective employee because of creed, color, or nationality.

6. The principles of seniority shall prevail as to all employees below the grade of foreman.

7. No employee shall be discharged or discriminated against in his or her work nor shall any person be refused employment because he or she belongs to a trade-union.

8. Thirty days' continuous employment shall be accepted as prima facie proof of general competency. After said period the specific act or acts of incompetency must be given a dismissed employee upon demand of himself or representatives.

9. Where pieceworkers are employed piece-rate schedules shall be constantly displayed for unhindered inspection.

10. Employees shall not be required to join company sick and death benefit associations.

11. The companies shall furnish proper dressing rooms, lunch rooms, wash rooms, and toilets.

12. Copies of this agreement shall be printed, framed, and posted in all shops and other work places.

RECENT AWARDS OF THE SHIPBUILDING LABOR ADJUSTMENT BOARD.

The following awards have recently been made by the Shipbuilding Labor Adjustment Board:

Decision as to wages, hours, and other conditions in the shipyards of the Newport News Shipbuilding & Dry Dock Co., March 7, 1918.

Decision as to wages, hours, and other conditions in South Atlantic and Gulf shipyards, March 4, 1918, corrected and extended April 6, 1918.

Decision as to wages, hours, and other conditions in North Atlantic and Hudson River shipyards, April 6, 1918.

Decision as to wages, hours of work, and other conditions in shipyards about the Great Lakes, April 19, 1918.

In addition to the above the following awards have been made by the board and have been published in the MONTHLY REVIEW:

Decision touching disputes in shipyards of San Francisco Bay and Columbia River and Puget Sound districts, November 4, 1917, as revised to February 1, 1918. (MONTHLY REVIEW for March, 1918, p. 67.)

Decision as to wages, hours, and other conditions in the Delaware River and Baltimore shipyards, February 14, 1918, as corrected and extended March 1, 1918. (MONTHLY REVIEW for April, 1918, p. 186.)

The text of three[1] of the recent awards follows:

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN THE SHIPYARD OF THE NEWPORT NEWS SHIPBUILDING & DRY DOCK CO.

First. The wage scale for day workers prescribed in this decision in Exhibit "A" is to be put into effect on March 11. Pieceworkers are to have piece earnings beginning March 11, increased 10 per cent until the new piece rates prescribed in the piece-rate book about to be issued by the Shipbuilding Labor Adjustment Board can be put into effect. The board directs that the uniform rates prescribed in its forthcoming piece-rate book be put into effect by the Newport News Shipbuilding & Dry Dock Co. as soon as practicable after copies of the piece-rate book have been received.

Second. As regards hours of employment, we prescribe the following rules:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive; provided that during the months of June, July, and August the working days on Saturdays shall be four hours.

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[1] The award affecting employees in the shipyards about the Great Lakes is practically the same as that affecting employees in the North Atlantic and Hudson River shipyards (pp. 136 to 142. The variations are noted on p. 142.

(2) Work in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 60 hours a week for any employee shall not be permitted, except on repair work, or when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday; Decoration Day or Memorial Day; Fourth of July; Labor Day; Thanksgiving Day; and Christmas Day.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Employees engaged on repair work in or upon vessels undergoing repair shall receive double time for all overtime on week days as defined above, as well as on Sundays and the specified holidays.

Our purpose in limiting overtime by the above 60-hours-a-week regulation is to discourage a resort to excessive overtime, which leads to inefficiency and tends to lessen rather than to increase production, and to encourage the introduction of the two and three shift systems. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the Newport News Shipbuilding & Dry Dock Co. to take immediate steps looking toward the introduction of additional shifts in their yards.

Third. For all "dirty work" in connection with the repair of vessels performed in or upon the vessel, employees of the different crafts shall receive 10 cents an hour more than the minimum hourly rates prescribed in Schedule "A" of this decision.

Fourth. Rates of wages now being paid to individual employees in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Fifth. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Sixth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyard and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates tentatively fixed and report a recommendation for their confirmation or modification by this board. The board may on the basis of such report and recommendation determine a uniform minimum rate for each such occupation, and add it to the rates prescribed in this award.

(Signed) V. Everit Macy, *Chairman.*
(Signed) Louis A. Coolidge.
(Signed) A. J. Berres.

Washington, D. C., *March 7, 1918.*

Exhibit A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in the employ of Newport News Shipbuilding & Dry Dock Co.

Acetylene department:	Rate per hour.
Burners, first class	$0.65
Burners, second class	.60
Grinders	.50
Chippers	.50
Welders	.65

Angle smith department:	Rate per hour.
Angle smiths, heavy fires	$0.87½
Angle smiths, other fires	.72½
Electric welders	.65
Firemen	.45

	Rate per hour.
Blacksmith department:	
Hammer and machine forgers, heavy	$1.35
Heaters	.55
Lever men and cranemen	.70
Hammer runners, heavy	.55
Blacksmiths, heavy fires	.87½
Blacksmiths, other fires	.72½
Drop forgers	.70
Bolt makers	.72½
Liner forgers	.55
Toolsmiths	.72½
Boiler shop:	
Boiler makers	.70
Drillers	.60
Holders-on	.50
Rivet heaters	.25
Planer hands	.55
Bolting and liner departments:	
Bolters	.50
Liner men	.54
Cement department:	
Cementers	.50
Chipping and calking department:	
Tank testers	.70
Hand chippers and calkers	.70
Pneumatic chippers and calkers	.65
Packers	.50
Coppersmith department:	
Coppersmiths	.70
Plumbers	.72½
Pipe fitters	.72½
Pipe coverers	.65
Pipe-fitting machine men	.65
Drilling and reaming department:	
Drillers	.60
Reamers	.50
Electrical department:	
Electricians, first class	.70
Electricians, second class	.65
Wiremen	.55
Joiners	.70
Machinists, first class	.72½
Machinists, second class	.62½
Fitting-up department:	
Fitters, first class	.72½
Fitters, second class	.65
Regulators, first class	.60
Regulators, second class	.52½
Foundry department:	
Molders	.72½
Cupola tenders	.55

	Rate per hour.
Foundry department—Concld.	
Chippers	$0.50
Furnace men	.55
Hull engineering department:	
Marine erectors, first class	.72½
Marine erectors, second class	.62½
Joiners	.70
Joiner department:	
Joiners	.70
Machine operators	.70
Lumber department:	
Machine men	.65
Machine shop:	
Machinists, first class	.72½
Machinists, second class	.62½
Buffers and polishers	.52
Die sinkers	.75
Riggers	.62½
Material labor department:	
Engineers, locomotive	.65
Operators, locomotive, cantilever, gantry, and other cranes of over three tons	.70
Operators, stiff-legged derricks	.65
Hoisting and portable firemen	.45
Locomotive conductors	.50
Road crane conductors	.50
Mold loft:	
Gang leaders	.85
Loftsmen, first class	.82½
Loftsmen, second class	.72½
Joiners	.70
Paint department:	
Painters and polishers	.60
Pattern shop:	
Pattern makers	.75
Power house department:	
Engineers	.70
Oilers	.45
Water tenders	.45
Rigging department:	
Marine leaders	.75
Marine riggers	.62½
Crane leaders	.75
Crane-gang leaders	.67½
Cranemen	.60
Erector leaders	.60
Erectors	.50
Riveting department:	
Rivet testers	.70
Stage builders	.57½
Hand riveters	.70
Pneumatic riveters	.65

	Rate per hour.
Riveting department—Concld.	
Holders-on	$0.50
Heater boys	.25
Passer boys	.20
Ship carpenter department:	
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Fasteners	.60
Erectors	.50
Wood calkers	.70
Wood reamers	.55
Ship shed department:	
Punchers	.55
Planers and scarfers	.55
Countersinkers	.55
Drillers	.60
Ship shed department—Concld.	
Bending rollers	$0.62½
Mangle rollers	.57½
Pressmen, first class	.62½
Pressmen, second class	.55
Offsetters	.55
Sawyers	.47½
Ventilation department:	
Layers-out	.70
Sheet metal workers	.70
All departments:	
Helpers, first class	.42½
Helpers, second class	.37½
Laborers	.35
Common laborers	.30

If unable to secure an adequate force of fully qualified journeymen at the rates specified in this award, the Newport News Shipbuilding & Dry Dock Co. may employ men who have not yet become fully qualified journeymen at minimum hourly rates 10 cents less than those fixed for such journeymen in this scale; provided such men, if retained in employment, shall be advanced to journeymen's wages after having been employed for six months after the date of this award, or after the date thereafter when they accept employment at such lower rate.

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN SOUTH ATLANTIC AND GULF SHIPYARDS BY SHIPBUILDING LABOR ADJUSTMENT BOARD MARCH 4, 1918, CORRECTED AND EXTENDED APRIL 6, 1918.

First. Since the publication of the board's decision in regard to wages, hours, and working conditions in South Atlantic and Gulf shipyards on March 4, we have held a conference in Washington with the shipyard owners and employees affected which has revealed the special difficulties which must be overcome to attract and hold in these Southern yards the force of skilled mechanics which they require to complete the ships they have under construction.

To the South even more than to the North the shipbuilding industry is a new industry. Not only shipyards and equipment have to be called into being, but skilled mechanics have to be drawn in or trained in numbers far beyond the available local supply. To these obstacles to the successful prosecution of the industry, the long, hot summer offers a further handicap. Testimony not only from employees but also from employers and the district officers of the Shipping Board Emergency Fleet Corporation presented at our second hearing indicated a very general conviction that unless wages and other conditions are made as attractive in Southern yards as they are farther north skilled workers, whose earnings permit them to move freely from place to place will migrate. In fact we are advised officially that such migration from one Southern city has already begun. Unless this tendency is checked, the completion in any near future of the ships in process of construction in the Southern yards will be impossible.

In the light of these facts we have decided to substitute a modified wage scale for that previously announced. By means of it we hope that the shipyard contractors may be enabled to draw skilled mechanics to their yards from interior towns.

Encouraged by it we hope that these skilled craftsmen and the employees in the Southern shipyards will disprove the current assumption that Southern labor is less efficient than Northern labor and set an example to the whole country by turning out the ships we so vitally need in record-breaking time.

By establishing the same wage scale for skilled mechanics for the whole Atlantic coast and Gulf, we have made it possible in coming months to institute accurate comparisons between all shipyards. The actual cost of each ton of shipping turned out by the different yards will from now on measure the efficiency of the shipyard employers and employees in these yards and enable the Government to decide wisely what yards should be fostered through additional shipbuilding orders and what should be suppressed because unable to keep pace with the rest of the country. Southern shipyard owners and shipyard employees are thus given an opportunity by our decision to show that they can build ships as economically and efficiently as the shipyards of any other district. We believe that they will seize this opportunity with loyal enthusiasm for the benefit of our common country.

Second. At different times since November, 1917, disputes have arisen on the different shipyards in the district covered by this award. In accordance with statements made either by this board or by officials of the Emergency Fleet Corporation, on the basis of which these disputes have been temporarily settled, we make the minimum rates of wages fixed in Exhibit "A" of this decision retroactive for the employees of the Tampa Shipbuilding & Engineering Co., to November 1, 1917; for those of the Terry Shipbuilding Co. in Savannah, Ga., to January 11, 1918; for those in the shipyards of Brunswick, Ga., and Mobile, Ala., and vicinity, to January 15, 1918; for those of the shipyards of Beaumont, Houston, and Orange, Tex., to January 23, 1918, except for laborers in the shipyards of Orange for whom the retroactive date is to be November 27, 1918, and for those of all the other shipyards of the district under the jurisdiction of the board to February 1, 1918.

To determine the back pay due to an employee on the hourly wage system, the new hourly wage fixed by the board is to be multiplied by the total number of hours which such employee worked from the retroactive date until the date when the new wage scale was put into effect. From the product thus determined the total wage, including premiums and bonuses of every kind, which the employee received for his work, is to be deducted. The balance constitutes the back pay to which he is entitled. In determining the total number of hours of employment, hours counted and paid for at time and one-half, or double time when the original payment was made, are to be counted as time and one-half or double time in calculating earnings at the new rates of wages, but all other hours are to be calculated as straight time.

The back pay to employees in accordance with this provision shall be paid at the earliest date at which the elaborate calculations necessary to their determination can be completed and approved by the auditing department.

Third. In fairness to employees whose rates of wages are fixed by this award and who because of the lack of adequate housing facilities near the plants in which they are employed, are compelled not only to lose time but to suffer a reduction in their earnings to reach their place of employment, we direct that shipyards provide the employees whose rates of wages are fixed by this award and who are compelled to expend regularly more than 10 cents a day in coming to and going from their work with free commutation or other tickets. In providing free transportation to its employees coming from a distance, each shipyard must adopt such precautions to prevent the privilege from being abused as may be prescribed by the auditors of the Navy Department and the Emergency Fleet Corporation. This provision is subject to change at any time that the board is convinced that suitable and adequate housing facilities are available.

Evidence has been presented to us showing that some of the shipyards supply certain of their employees to other shipyards, requiring such employees to pay their own transportation charges. When such expense for transportation for employees ordered to work for other yards exceeds 10 cents a day we direct that the employing yard pay the excess above 10 cents in addition to wages conforming to the minimum scale fixed in this award.

Fourth. As regards hours of employment, we prescribe the following rules for all of the shipyards of the district covered by this award:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive, provided that during the months of June, July, and August the working day on Saturdays shall be 4 hours.

(2) Work on ship construction in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 12 hours a day or 60 hours a week for any employee shall not be permitted except when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life and property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Employees engaged on repair work upon or for vessels undergoing repair shall receive double time for all overtime on week days as defined above, as well as on Sundays and the specified holidays.

Our purpose in prescribing the maximum daily and weekly working period is to discourage a resort to excessive overtime which leads to inefficiency and tends to result not only in increased costs but in lessened production. We wish also to encourage the introduction of the two and three shift system. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the southern shipyards to take immediate steps looking toward the introduction of additional shifts in their yards.

Fifth. The shipyard owners are directed to cooperate with employees in making effective the following rules in reference to machinery for the settlement of industrial disputes.

(1) The employees in each craft or calling in a shop or yard shall have the right to select three of their number to represent them as members of a shop committee. Each member of this committee shall be chosen by majority vote through secret ballot in such manner as the employees shall direct. The chairman of each shop committee shall be a member of a joint shop committee.

(2) When a grievance arises it shall be taken up by the craft or laborers' committee, with the foreman or general foreman. In the event the grievance has not been adjusted, it shall then be taken up by the joint shop committee, first with the superintendent, and then failing a settlement, with the higher officials of the company. If the matter can not be adjusted between the joint shop committee and these officials, the joint shop committee shall have the right to call into the conference a representative chosen by the committee. In case such conference fails to result in a satisfactory adjustment, the grievance shall be submitted to the examiner to be appointed by the Shipbuilding Labor Adjustment Board as provided in the memorandum of December 8, 1917, creating this board.

(3) Any committeeman appointed hereunder who shall be found to have been discharged without just or sufficient cause after due investigation in the matter herein provided for the adjustment of grievances shall be reinstated with full pay for all time lost.

Sixth. The question of employing apprentices shall be taken up for adjustment in the manner provided herein for the adjustment of grievances.

Seventh. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Eighth. Employees shall be paid at least once a week on the company's time, and in no case shall more than three day's pay be held back.

Ninth. Any employee laid off or discharged, shall within 24 hours receive all wages due him.

Tenth. No employee shall be required by the employing shipyard to pay any assessment for insurance, medical attendance, or other benefits, or to sign as a condition to employment any waiver of his legal rights.

Eleventh. Competent medical first aid shall be provided for employees requiring such aid and paid for by the employer.

Twelfth. Shipyard owners are directed to provide for their employees adequate and sanitary toilets, washing facilities, and pure drinking water, properly cooled during the summer months.

Thirteenth. The minimum rates of wages to be paid to different classes of employees by all of the shipyards of the district shall be those set forth in the schedule appended hereto (Exhibit A), which is made a substantive part of this award.

Fourteenth. Rates of wages now being paid to individual employees in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Fifteenth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyards and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates tentatively agreed upon and report a recommendation for their confirmation or modification by this board. The board may, on the basis of such report and recommendation, determine a uniform minimum rate for each such occupation and add it to the rates prescribed in this award.

Sixteenth. Under rulings of the Navy Department and the United States Shipping Board Emergency Fleet Corporation, the jurisdiction of this board is limited to shipyards which have direct contracts, other than lump-sum contracts, for submarine chasers, from the Navy Department or the Emergency Fleet Corporation and to employees engaged in work in connection with such contracts. The provisions of this decision apply only to yards and employees in yards under our jurisdiction as above defined, and not to private contracts or to employees engaged in work in connection with such contracts.

Seventeenth. The rates and other conditions prescribed in this decision, except as otherwise provided, shall be put into effect on or before Monday, April 22, 1916.

(Signed) V. EVERIT MACY, *Chairman.*
(Signed) LOUIS A. COOLIDGE.
(Signed) A. J. BERRES.

WASHINGTON, D. C., *April 6, 1918.*

ADDENDA TO DECISION FOR SOUTH ATLANTIC AND GULF SHIPYARDS.

(1) To the stated holidays add: Half holidays on State and national election days.

(2) The retroactive provision does not apply to the payment by the employer of the transportation expense of employees nor to the 5 per cent bonus for night work; these payments are intended to begin with March 25.

EXHIBIT A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in steel-ship yards.

	Rate per hour.
Acetylene department:	
Burners, first class	$0.65
Burners, second class	.60
Grinders	.50
Chippers	.50
Welders	.65
Helpers	.46
Angle smith department:	
Angle smiths, heavy fires	.87½
Angle smiths, heavy fires, helpers	.55
Angle smiths, other fires	.72½
Angle smiths, other fires, helpers	.46
Furnace men on shapes and plates (ship work)	.82½
Electric welder	.65
Blacksmith shop:	
Hammer and machine forgers, heavy	1.35
Heater	.55
Lever men or cranemen	.70
Helpers	.50
Hammer runner, heavy	.55
Blacksmiths, heavy fires	.87½
Blacksmiths, heavy fires, helpers	.55
Blacksmiths, other fires	.72½
Blacksmiths, other fires, helpers	.46
Drop forgers	.70
Drop forgers, helpers	.50
Bolt makers	.72½
Bolt makers, helpers	.46
Liner forgers	.55
Liner forgers, helpers	.46
Boiler shop:	
Boiler makers	.70
Drillers	.60
Holders-on	.50
Rivet heaters	.40
Flange turners	.75
Helpers	.46
Slab furnace men	.75
Planer hands	.55
Bolting and liner department:	
Bolters	.50
Liner men	.54
Helpers	.42½
Cement department:	
Cementers	$0.50
Helpers	.42½
Chipping and calking department:	
Tank testers	.70
Chippers and calkers	.70
Packers	.50
Coppersmith department:	
Coppersmiths	.72½
Plumbers and pipe fitters	.72½
Helpers	.46
Drilling and reaming department:	
Drillers	.60
Reamers	.50
Electrical department:	
Electricians, first class	.70
Electricians, second class	.65
Wiremen	.55
Joiners	.70
Machinists, first class	.72½
Helpers	.45
Erecting department:	
Leading men	.85
Marine erectors, first class	.72½
Marine erectors, second class	.62½
Specialists or handy men	.52
Helpers	.45
Fitting-up department:	
Fitters, first class	.72½
Fitters, second class	.65
Regulators, first class	.60
Regulators, second class	.52½
Helpers	.46
Foundry department:	
Molders	.72½
Cupola tenders	.72½
Helpers	.46
Hand and machine chippers	.50
Furnace department:	
Leaders	.67½
Firemen and helpers	.55
Strikers	.55
Hull engineering department:	
Marine erectors, first class	.72½
Marine erectors, second class	.62½
Specialists or handy men	.52
Joiners	.70
Helpers	.46

	Rate per hour.
Joiner department:	
Joiners	$0.70
Machine men	.70
Helpers	.42½
Lumber department:	
Machine men	.65
Helpers	.42½
Machine shop:	
Machinists, first class	.72½
Machinists, second class	.62½
Specialists or handy men	.52
Metal polishers, buffers and platers	.70
Helpers	.46
Material labor department:	
Engineers, locomotive	.65
Operators, locomotive, cantilever, gantry, and other cranes of over 3 tons	.70
Operators, stiff-legged derricks	.65
Hoisting and portable firemen	.50
Locomotive conductors	.50
Road crane conductors	.50
Mold loft:	
Gang leaders	.85
Loftsmen, first class	.82½
Loftsmen, second class	.72½
Joiners	.70
Helpers	.42½
Paint department:	
Painters and polishers	.60
Bitumastic painters	.72½
Helpers	.42½
Pattern shop:	
Pattern makers	.75
Laborers	.40
Rigging department:	
Marine leaders	.75
Marine riggers	.62½
Rigging department—Contd.	
Crane leaders	$0.75
Crane-gang leaders	.67½
Cranemen	.60
Erector leaders	.60
Erectors	.50
Riveting department:	
Rivet testers	.80
Stage builders	.57½
Riveters	.70
Holders-on	.50
Heater boys	.38
Passer boys	.30
Helpers	.46
Ship carpenter department:	
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Helpers	.46
Ship shed department:	
Punchers	.55
Planer and scarfer	.55
Countersinkers	.55
Drillers	.60
Bending rollers	.70
Mangle rollers	.57½
Pressmen, first class	.62½
Pressmen, second class	.55
Offsetters	.55
Sawyers	.47½
Helpers	.46
Ventilation department:	
Sheet-metal workers	.70
Helpers	.46
All departments:	
Layers-out shall receive 3 cents an hour more than first-class journeymen in the same department.	
Laborers	.40
Common laborers	.30

Minimum rates for employees in wooden shipyards, in addition to those specified for steel ship yards.

Loftsmen, first class	$0.82½
Loftsmen, second class	.72½
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Joiners	.70
Mill men	.70
Calkers	.70
Fasteners	.55
Reamers	.55
Offsetters	.55

Erectors	$0.55
Carpenters' helpers	.46
Laborers	.40
Common laborers	.30
Oakum spinners, per bale	2.25

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN NORTH ATLANTIC AND HUDSON RIVER SHIPYARDS.

First. One of the most serious influences retarding the progress of the shipbuilding industry, according to the unanimous testimony of the yard owners and of the district officers of the Fleet Corporation who have come before us, is the shifting of men from yard to yard. If the shipbuilding program, so vital to our success in the war, is to be realized, this shifting must be stopped. The only effective way to stop it is to remove its inciting cause, the variable wage rates paid by different yards in the same competitive region. With this purpose in view we have sought in all of our hearings to determine with accuracy the limits of each competitive region, so that we might extend over it a uniform wage scale for shipyard employees.

We have been successful in checking the shifting of labor from yard to yard within the districts in which we have established uniform scales, but this has only aggravated the tendency toward shifting between districts. From Maine to Florida complaints reach us that this shifting is going on to the extent of thousands of men a day. Just as this decision is issued, a single yard reports that its daily loss of employees exceeds 200. The loss in output of tonnage of ships to the country as a whole from this cause can hardly be exaggerated.

After giving the most careful consideration to every aspect of the question, the ease of transportation along the Atlantic and Gulf coasts, the available local labor supplies, and local wage conditions, the cost of living in different shipbuilding centers, etc.—we have come to the conclusion that the shifting of labor will not be checked until the same wage scale, at least for all skilled mechanics, is established for the whole Atlantic coast and Gulf region. We have accordingly decided to establish for all shipyards of the North Atlantic under the jurisdiction of this board the scale set forth in Exhibit A. We are at the same time extending the same rates for skilled mechanics to all South Atlantic and Gulf coast shipyards.

Second. The wage rates set forth in Exhibit A are higher than those now paid in the North Atlantic shipyards and as high or higher than the rates paid in the most representative outside shops employing the same crafts as the shipyards. Nevertheless, they are lower than were requested by the representatives of organized labor at our hearings. The principal argument urged for still higher rates was the increase in the cost of living in the vicinity of New York City, claimed to have been not less than 100 per cent since the beginning of the War.

Appreciating the justice of the contention that wages should be advanced to keep pace with the rising cost of living, we have made a special effort to secure exact information on this point. A thorough investigation of changes in the New York district, not only in retail prices of food, clothing, and other items consumed by wage earners, but also in rents, related to the family budgets of over 600 typical families whose heads are employed in shipbuilding, has been made for us by the United States Bureau of Labor Statistics. This proved an increase so much smaller than that claimed by the representatives of labor that we submitted the data which they presented at our hearings to the bureau for careful analysis. The bureau's report shows that the principal reason for the discrepancy was the difference in the method used in the two investigations. The bureau correctly weighted each item in its investigation according to the proved importance of that item among a normal

family's expenditures; in the investigation of the men showing the 100 per cent increase all items, even the most insignificant, were treated as of equal importance. Thus salad oil increasing 275 per cent was treated as equally important with bread increasing only 33⅓ per cent; caps increasing 100 per cent as equally important with suits of clothes increasing only 52.2 per cent. Other reasons for the abnormally high increase in the cost of living shown was the comparison of the prices of vegetables and fresh fruits in the winter with their prices in the summer, and of the prices of winter garments with those of summer garments. In view of the fact that the conclusions of the Bureau of Labor Statistics as to the true rise in the cost of living since the beginning of the War correspond closely with other investigations, such as those made for the railroad brotherhoods and submitted by them in connection with their request for an increase in wages, we feel constrained to accept it as substantially accurate. Adding this increase to the wage rates submitted by the men as having prevailed in shipyards in 1914, we get rates somewhat lower for nearly all crafts than those given in Exhibit A. We believe, therefore, that the wage scale fixed makes full allowance for the increased cost of living in the New York district, which appears to have been about the same as in other localities.

Because of this fact and of the necessity which the War imposes of adopting the policy which will result in the maximum production of ships in the minimum time, we have thought it our duty to disregard local considerations and to stabilize as much as possible the whole shipbuilding industry. Though this policy does not benefit wage earners equally in all sections, it works injustice to none. We count confidently on the patriotic cooperation of both shipyard owners and employees to make this national war policy a success.

Third. In accordance with the statement made by the board when the hearing on labor conditions in the yards in and near New York City was postponed, the wage rates enumerated in Exhibit A are to be retroactive for the employees in the occupations enumerated in Exhibit A in the shipyards in the district about New York Harbor, including Bridgeport, under our jurisdiction, to March 11, 1918, for steel shipyards north of Bridgeport under our jurisdiction, to March 20, and for all other yards covered by the award to April 1, 1918.

To determine the back pay due to an employee on the hourly wage system, the new hourly wage fixed by the board is to be multiplied by the total number of hours which such employee worked from the retroactive date until the date when the new wage scale was put into effect. From the product thus determined the total wage, including premiums and bonuses of every kind which the employee received for his work, is to be deducted. The balance constitutes the back pay to which he is entitled. In determining the total number of hours of employment, hours counted and paid for as overtime when the original payment was made are to be counted as overtime at the established rating in calculating earnings at the new rate of wages, but all other hours are to be calculated as straight time. The back pay due to both day workers and pieceworkers shall be paid at the earliest date at which the elaborate calculations necessary to their determination can be completed and approved by the auditing department.

Fourth. As regards hours of employment, we prescribe the following rules for all of the shipyards of the district covered by this award:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive: provided, that during the months of June, July, and August the working-day on Saturdays shall be four hours.

(2) Work on ship construction in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half time.

(3) Work on ship construction on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday, Decoration

Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day, and a half holiday on State and national election days.

(4) Employees engaged on repair work upon or for vessels undergoing repair shall continue to receive the extra compensation which was customary in the yard at the time this decision was rendered for overtime on week days, as defined above, as well as on Sundays and the specified holidays.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Work in excess of 12 hours a day or 60 hours a week for any employee shall not be permitted, except when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

Our purpose in prescribing the maximum daily and weekly working period is to discourage a resort to excessive overtime, which leads to inefficiency and tends to result not only in increased costs but lessened production. We wish also to encourage the introduction of the two and three shift system. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the shipyards of this district to take immediate steps looking toward the introduction of additional shifts in their yards. We believe that this is entirely practicable even for repair yards since such yards, during the War, have been and probably will be continuously employed to their full capacity.

Fifth. The shipyard owners are directed to cooperate with employees in making effective the following rules in reference to machinery for the settlement of industrial disputes:

(1) The employees in each craft or calling in a shop or yard shall have the right to select three of their number to represent them as members of a shop committee. Each member of this committee shall be chosen by majority vote through secret ballot in such manner as the employees shall direct. The chairman of each shop committee shall be a member of a joint shop committee.

(2) When a grievance arises it shall be taken up by the craft or laborers' committee with the foreman or general foreman. In the event the grievance has not been adjusted, it shall then be taken up by the joint shop committee, first with the superintendent, and then, failing a settlement, with the higher officials of the company. If the matter can not be adjusted between the joint shop committee and these officials, the joint shop committee shall have the right to call into conference a representative chosen by the committee. In case such conference fails to result in a satisfactory adjustment, the grievance shall be submitted to the examiner to be appointed by the Shipbuilding Labor Adjustment Board, as provided in the memorandum of December 8, 1917, creating this board.

(3) Any committeeman appointed hereunder who shall be found to have been discharged without just or sufficient cause, after due investigation in the manner herein provided for the adjustment of grievances, shall be reinstated with full pay for all time lost.

Sixth. The question of employing apprentices shall be taken up for adjustment in the manner provided herein for the adjustment of grievances.

Seventh. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Eighth. Employees shall be paid at least once a week on the company's time and in no case shall more than three days' pay be held back.

Ninth. Any employee laid off or discharged shall, within 24 hours, receive all wages due him.

Tenth. No employee shall be required by the employing shipyard to pay any assessment for insurance, medical attendance, or other benefits.

Eleventh. Competent medical first aid shall be provided for employees requiring such aid and paid for by the employer.

Twelfth. Shipyard owners are directed to provide for their employees adequate and sanitary toilets, washing facilities, and pure drinking water properly cooled during the summer months.

Thirteenth. The minimum rates of wages to be paid to different classes of employees by all of the shipyards of the district under our jurisdiction shall be those set forth in the schedule appended hereto (Exhibit A) which is made a substantive part of this award.

The board found conditions as regards the size of yards and the efficiency of their equipment so variable in the district that it deems it unwise to attempt to standardize piece rates. It directs that the piece rates prevailing for pieceworkers employed in the district at the time this decision is rendered be increased 15 per cent and that the back pay for such pieceworkers be determined by multiplying their total earnings at piecework during the period when they are entitled to back pay under this award by 15 per cent.

Fourteenth. In a yard in process of construction where the Navy Department or the Emergency Fleet Corporation is paying the entire cost of such construction the rates of wages to be paid to employees engaged on construction work shall be at the prevailing rates in the building trades in the locality in which the yard is situated.

Fifteenth. Hourly or weekly rates of wages now being paid to individual employees in excess of the minimum rates fixed are in nowise altered or affected by the establishment of these rates.

Sixteenth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyards and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates suggested and report a recommendation for their confirmation or modification by this board. The board may on the basis of such report and recommendation determine a uniform minimum rate for each such occupation.

Seventeenth. Under rulings of the Navy Department and the United States Shipping Board Emergency Fleet Corporation, the jurisdiction of this board is limited to shipyards which have direct contracts, other than lump-sum contracts for submarine chasers, from the Navy Department or the Emergency Fleet Corporation and to employees engaged in work in connection with such contracts. The provisions of this decision apply only to yards and employees in yards under our jurisdiction as above defined and not to private contracts or to employees engaged in work in connection with such contracts.

Eighteenth. The rates and other conditions prescribed in this decision, except as otherwise provided, shall be put into effect on or before Monday, April 22, 1918.

(Signed) V. Everit Macy, *Chairman.*
(Signed) Louis A. Coolidge.
(Signed) A. J. Berres.

Approved, with the following reservation:

In my opinion there should be a clear disavowal of any intention to impose the findings of the board upon shipyards within which no disputes between employer and employed have arisen resulting in the failure of attempts at mediation or conciliation between those directly involved. The board under the memorandum creating it has no jurisdiction over such yards. It is established to meet a grave war emergency, and its machinery should not be used by organizations of employers or employees to strengthen permanently such organizations or to change working conditions in plants where labor controversies do not imperil effectiveness of operation or impede production.

(Signed) Louis A. Coolidge.

Washington, D. C., *April 6, 1918.*

EXHIBIT A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in steel-ship yards.

	Rate per hour.
Acetylene department:	
Burners, first class	$0.65
Burners, second class	.60
Grinders	.50
Chippers	.50
Welders	.65
Helpers	.46
Angle smith department:	
Angle smiths, heavy fires	.87½
Angle smiths, heavy fires, helpers	.55
Angle smiths, other fires	.72½
Angle smiths, other fires, helpers	.46
Furnace men on shapes and plates (shipwork)	.82½
Electric welder	.65
Blacksmith shop:	
Hammer and machine forgers, heavy	1.35
Heater	.55
Lever men or cranemen	.70
Helpers	.50
Hammer runners, heavy	.55
Blacksmiths, heavy fires	.87½
Blacksmiths, heavy fires, helpers	.55
Blacksmiths, other fires	.72½
Blacksmiths, other fires, helpers	.46
Drop forgers	.70
Drop forgers, helpers	.50
Bolt makers	.72½
Bolt makers, helpers	.46
Laborers	.40
Liner forgers	.55
Liner forgers, helpers	.46
Boiler shop:	
Boiler makers	.70
Drillers	.60
Holders-on	.50
Rivet heaters	.40
Flange turners	.75
Helpers	.46
Slab-furnace men	.75
Planer hands	.55
Bolting and liner department:	
Bolters	$0.50
Liner men	.54
Helpers	.42½
Cement department:	
Cementers	.50
Helpers	.42½
Chipping and calking department:	
Tank testers	.70
Chippers and calkers	.70
Packers	.50
Cleaning department:	
Leader	.55
Laborers	.40
Coppersmith department:	
Coppersmiths	.72½
Plumbers and pipe fitters	.72½
Helpers	.46
Drilling and reaming department:	
Drillers	.60
Reamers	.50
Electrical department:	
Electricians, first class	.70
Electricians, second class	.65
Wiremen	.55
Joiners	.70
Machinists, first class	.72½
Helpers	.46
Erecting department:	
Leading men	.85
Marine erectors, first class	.72½
Marine erectors, second class	.62½
Specialists or handy men	.52
Helpers	.46
Fitting-up department:	
Fitters, first class	.72½
Fitters, second class	.65
Regulators, first class	.60
Regulators, second class	.52½
Helpers	.46
Foundry department:	
Molders	.72½
Cupola tenders	.72½
Helpers	.46
Hand and machine chippers	.50
Laborers	.40

	Rate per hour.
Furnace department:	
Leaders	$0.67½
Firemen and helpers	.55
Strikers	.55
Hull engineering department:	
Marine erectors, first class	.72½
Marine erectors, second class	.62½
Specialists or handy men	.52
Joiners	.70
Helpers	.46
Joiner department:	
Joiners	.70
Machine men	.70
Helpers	.42½
Lumber department:	
Machine men	.65
Helpers	.42½
Machine shop:	
Machinists, first class	.72½
Machinists, second class	.62½
Specialists or handy men	.52
Metal polishers, buffers, and platers	.70
Helpers	.46
Material labor department:	
Engineers, locomotive	.65
Operators, locomotive, cantilever, gantry, and other cranes of over 3 tons	.70
Operators, stiff-legged derricks	.65
Hoisting and portable firemen	.50
Locomotive conductors	.50
Road crane conductors	.50
Mold loft:	
Gang leaders	.85
Loftsmen, first class	.82½
Loftsmen, second class	.72½
Joiners	.70
Helpers	.42½
Paint department:	
Painters and polishers	.60
Bitumastic painters	.72½
Helpers	.42½
Pattern shop:	
Pattern makers	$0.75
Laborers	.40
Rigging department:	
Marine leaders	.75
Marine riggers	.62½
Crane leaders	.75
Crane-gang leaders	.67½
Cranemen	.60
Erector leaders	.60
Erectors	.50
Riveting department:	
Rivet testers	.80
Stage builders	.57½
Riveters	.70
Holders-on	.50
Heater boys	.38
Passer boys	.30
Helpers	.46
Ship carpenter department:	
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Helpers	.46
Ship shed department:	
Punchers	.55
Planer and scarfer	.55
Countersinkers	.55
Drillers	.60
Bending rollers	.70
Mangle rollers	.57½
Pressmen, first class	.62½
Pressmen, second class	.55
Offsetters	.55
Sawyers	.47½
Helpers	.46
Ventilation department:	
Sheet-metal workers	.70
Helpers	.46
All departments:	
Layers-out shall receive 3 cents an hour more than first-class journeymen in the same department.	
Laborers	.49

Minimum rates for employees in wooden-ship yards in addition to those specified for steel-ship yards.

Loftsmen, first class	$0.82½
Loftsmen, second class	.72½
Ship carpenters, first class	.70
Ship carpenters, second class	.65
Joiners	.70

	Rate per hour.
Millmen	$0.70
Caulkers	.70
Fasteners	.55
Reamers	.55
Offsetters	.55
Erectors	.55
Carpenters' helpers	.46
Laborers	.40
Oakum spinners (per bale)	2.25

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN SHIPYARDS ABOUT THE GREAT LAKES.

The award affecting employees in shipyards about the Great Lakes is practically the same as that affecting employees in North Atlantic and Hudson River shipyards given in the preceding pages, the shipbuilding labor adjustment board concluding "that substantial justice will be done to all classes of employees if we establish for each yard the same wage scale, hours, and other regulations that we have established for the shipyards on the North Atlantic coast. This wage scale will advance substantially the wages now paid in these yards to nearly all crafts."

The second provision in the North Atlantic award is not included in the award covering the Great Lakes district. Provision is made that the wages shall be retroactive until April 1, and that "piecework shall receive as their back pay 15 per cent of their total earnings at piecework from April 1 or other retroactive date until the piece rates to be established in accordance with this decision are put into operation." A new provision in connection with rate of wages established suggests that the board found that in certain departments—for example, the department of riveting and chipping and caulking—the employers and employees both prefer the piece wage system, and that the piece rate scale appropriate to the types of boats under construction in the yards of the Great Lakes district, when agreed upon and recommended to the adjustment board by representatives of shipyards and the piece rate crafts, shall, after approval by the board, be adopted by all the yards of the district employing pieceworkers.

Hours of employment after 5 p. m. and before 8 a. m. are to be counted as hours on the night shift and are entitled to the extra compensation provided. Hours in excess of 12 per day or 60 per week are not permitted except in special cases.

The Great Lakes award makes the following variations from the schedule of rates noted on pages 140 to 142: The inclusion of pipe coverers, coppersmithing department, at 65 cents per hour; the omission of drillers, ship-shed department, at 60 cents per hour, and the inclusion of drillers (operators of drill presses) at 55 cents per hour; and the establishment of a rate for laborers, all departments, of 40 cents per hour instead of 49 cents, as shown on page 141.

WAGES AND HOURS OF LABOR.

WAGE AWARD TO CINCINNATI BRICKLAYERS.

There exists in the city of Cincinnati an agreement between the Contracting Bricklayers' Association and Bricklayers' Union No. 18. Among the several provisions of this agreement is one which provides for a joint board of six members, three from each side, for the adjustment of grievances. Another provision of the agreement specifies that when the adjustment board is unable to agree upon the disposition of a difficulty it is to be augmented by a seventh person selected by mutual consent, and that the decision of the augmented board is to be final and binding.

Recently a question of the wage scale for bricklayers to become operative May 1, 1918, was submitted to the board for determination and, as no agreement could be reached, it was finally decided to augment the board by a seventh person. This seventh person was a prominent trade-unionist.

Aside from the fact that the decision of the arbitrator established a wage of $7.20 for an 8-hour day, the award made is interesting because of the procedure followed in making it. Inasmuch as the decision was to be based upon the facts presented by the opposing parties, the arbitrator decided to prepare a tentative or trial award which was to be read to both parties before the final decision was made. In effect, this procedure permitted both parties to file what might have been considered a bill of exceptions and to be heard upon these exceptions. This not only enabled both sides to discover the specific values which the arbitrator had placed upon the facts submitted to him, but also afforded an opportunity to the arbitrator to verify his conclusions and to modify them, if necessary. This novel method of procedure met with the unqualified approval of both parties and gave the award a value which otherwise it would not have had.

The following is the verbatim text of the award made:

AWARD OF THE ARBITRATOR.

When the seventh person sat with the joint board for the first meeting the statements made were that the members of the Bricklayers' Union No. 18 had presented a request to the Contracting Bricklayers' Association that their wages should be advanced from the present rate of 75 cents per hour to a rate of 90 cents per hour beginning with May 1, 1918, and that the representatives of the contractors' association had proposed the acceptance of an hourly wage rate of 80 cents.

At this meeting it was unanimously agreed that the question of wages would be considered from two broad points of view:

(*a*) Was the increase in wages which had been requested justified by any evidence to be introduced?

(*b*) If the evidence justified the request, would it be advisable to establish this rate, giving due consideration to the welfare of the industry?

Inasmuch as there were certain contracts for bricklaying entered into over a year ago, it was considered essential that the application of any new wage rate to such contracts should be determined.

One session of the joint board was devoted to the consideration of statements and evidence bearing upon the reduction in the purchasing power of wages since the European war began. It was found from the statistics supplied by the Federal Bureau of Labor and other authoritative sources that there had been a marked increase in the price of those necessities of life purchased by wage earners. The examination of these statistics led to the conclusion on the part of the six regular members of the joint board that the increase of 20 per cent asked for, which would make the hourly wage rate 90 cents instead of 75 cents, was not sufficient to meet the increase in the cost of living, or, in other words, to maintain the purchasing power of the bricklayers' earnings. The evidence upon this subject was so conclusive as to leave no ground for doubt or uncertainty and was accepted without a dissenting opinion.

Inasmuch as the evidence introduced had indicated that the members of Bricklayers' Union No. 18 had been justified in requesting an hourly wage rate of 90 cents, the important question then arose as to whether it was advisable in the best interests of the contractors and the bricklayers to establish this rate. Would a 90-cent rate affect the cost of building to such an extent as to prevent building operations which would be carried on if an 80-cent rate prevailed, and to what an extent would an 80 or 85 cent rate stimulate building operations which a 90-cent rate would check or prevent?

Would a 90-cent rate limit to any marked extent the number of buildings to be erected and reduce the amount of work for bricklayers?

In this field for examination, some definite evidence was introduced and the opinions expressed by the regular members of the joint board varied in degree if not in substance. The uncontradicted statements bearing upon this phase of the question were in effect, that a majority of building materials ranging from sand, cement, and bricks to lumber, paint, and structural steel had increased from 10 to 300 per cent. The consensus of opinion expressed by the regular members of the joint board was that a minimum average increase of these materials as used in the average building would approximately be 50 per cent higher than in normal times. It was also admitted that the cost of materials in the erecting of buildings was a larger item than the labor cost.

These statements made it apparent to the seventh person that the increase in the cost of building materials would prove a much greater factor in restricting building operations than the advance in wages asked for. From estimates introduced, which were not seriously questioned by any member of the joint board, the 90-cent hourly rate would increase the cost of erecting the average brick dwelling about 1 per cent.

It is apparent that every increase in the cost of erecting a building must tend to restrict building operations and the responsibility of determining whether the 90-cent hourly rate asked for would operate to a marked degree in holding back the investor and retarding building operations rests upon the seventh person. After giving most searching examination to all of the statements and arguments presented, it is his conclusion that regardless of the price of material, or the rates of wage, building operations will be at a minimum during the period of the War, except where these are required in connection with the production of war munitions or other national necessities. Furthermore, that there are no indications which would warrant the belief that the

present price of building material will be reduced during the period of the War, the probable tendency being toward still further increases. Furthermore, that these present prices of material are a far greater factor in retarding building operations than the wage rate, and finally, that the wage rate requested by the bricklayers will not materially affect the number of buildings to be erected in Cincinnati and vicinity during the War.

Believing that these conclusions are fully justified by the evidence and testimony introduced at the sessions of the joint board at which the seventh person was present, and convinced that the facts indicate that the bricklayers are entitled to a 90-cent hourly rate and that a lower rate would prove of no material benefit to the bricklaying industry, he submits as his decision that, beginning May 1, 1918, the hourly rate for bricklayers shall be 90 cents.

The question of the application of 90-cent rate to work previously contracted for which remains unfinished May 1, 1918, presents some features which the seventh person would not be justified in passing upon, except in so far as the establishing of the actual rate beginning May 1 is concerned.

As the result of many years of experience, it has become the practice by mutual agreement, that the bricklayers should give the contractors approximately six months' notice of their desire for an advance in wages. Not only is this a six months' notice for contractors, but it is also the period during which bricklayers must wait for such advance as the circumstances may justify them in receiving.

To establish a wage rate and then provide that contractors may employ members of the union for wages below the established rate, is to merely render a decision which even though justified, contains no power to carry it into effect, for no bricklayer could be persuaded or compelled to work against his will for a lesser rate than the one which had been established.

These are self-apparent facts.

The only body which has authority to pass upon such questions as to their merits, or grant such relief as may be justified by the facts connected with any particular case, is Bricklayers' Union No. 18.

In so far as the present award is concerned, the 90-cent hourly rate is to apply to all bricklayers on and after May 1, 1918.

WAGE INCREASES IN CERTAIN FOREIGN CITIES REPORTED BY AMERICAN CONSULS.

Through the State Department the Bureau of Labor Statistics is in receipt of communications from American consuls, respectively, at London, telling of newly established rates of pay for British navigation officers; at Nottingham (England), giving a statement of increased wages for tramway employees; at Bordeaux (France), noting wage increases in specified trades since the War began; at Amsterdam (Netherlands), indicating a contemplated increase in wages for municipal employees; and at Kingston (Ontario), outlining a campaign for the purpose of enlisting boys for farm work, with statement of wages to be paid, etc.

STANDARD PAY FOR BRITISH NAVIGATION OFFICERS.

According to the communication from the consul general at London, under date of February 27, 1918, the shipping controller announced a decision reached at a meeting held on February 25,

1918, of the navigating officers' panel of the National Maritime Board with regard to the monthly pay of navigating officers on cargo liners and general trading vessels, the new standard rates being set forth in the following table:

STANDARD RATES OF PAY FOR BRITISH NAVIGATION OFFICERS.

Rank.	Gross tonnage.	Pay at beginning.	Pay after 1 year.	Pay after 2 years.	Pay after 3 years.
First mate (with certificate of superior rating)	1,000 to 3,000	$107.06	$109.49	$111.93	$116.79
	3,001 to 5,000	111.93	114.36	116.79	121.66
	5,001 to 7,000	116.79	119.23	121.66	126.53
	7,001 to 9,000	121.66	124.09	126.53	131.39
First mate (with certificate of rating)	1,000 to 3,000	102.19	104.63	107.06	111.93
	3,001 to 5,000	107.06	109.49	111.93	116.79
	5,001 to 7,000	111.93	114.36	116.69	121.66
	7,001 to 9,000	116.79	119.23	121.66	126.53
Second mate (with certificate of superior rating)	1,000 to 3,000	94.89	97.33	.....	.....
	3,001 to 5,000	97.33	99.76	.....	.....
	5,001 to 7,000	99.76	102.19	.....	.....
	7,001 to 9,000	102.19	104.63	.....	.....
Officer (with second mate's certificate or uncertificated)	1,000 to 3,000	92.46	94.89	.....	.....
	3,001 to 5,000	94.89	97.33	.....	.....
	5,001 to 7,000	94.89	97.33	.....	.....
	7,001 to 9,000	97.33	99.76	.....	.....

Third mates, with or without certificates, receive $82.73 on all vessels up to 9,000 tons.

It is announced that "an officer's pay under the new scale will be determined as regards services by the period he has held his rank in the same employment as at February 25, 1918"; also that "an officer will be entitled to back pay at the same rate for any period of service on articles (or continuous employment with the same owners irrespective of articles) as from October 6, 1917, or from the date of commencing pay if subsequent thereto."

The consul general states that the rates indicated in the table are without prejudice to the question of overtime, and that it is to be understood that the cases of oil-tank steamers, motor vessels, sailing vessels, salvage and cable steamers, and other exceptional matters are not covered by this decision and have yet to be considered by the board.

INCREASED WAGES FOR NOTTINGHAM TRAMWAY EMPLOYEES.

The question of the demand of the tramway employees of Nottingham (England) for higher wages, declares the American consul at that place in a communication dated March 11, 1918, was submitted, after it became apparent that no decision could be reached between the employers and the employees, to the Ministry of Labor, which in turn referred the matter to the Committee on Production for settlement. This committee reached the decision that there shall be paid to the men concerned who are 18 years of age and over, and to the grades

of women of similar age whose terms of employment provide that they shall be paid the same rates as the grades of men whose places they are filling, a bonus of £1 ($4.87) over the prewar rates of the grades concerned, payment to be made on the basis of a week of six days of six shifts. It is further stated that in the case of women 18 years of age and over, not covered by the preceding clause, the advances now being paid are to be increased by 4s. (97 cents) per week, subject to a maximum of £1 ($4.87) per week over the prewar rates of the grades concerned. The report continues:

In the case of girls and boys under 18 years of age, the advances now being paid are to be increased by such amount per week as shall give them half the additional advances given by this award to the men or women in the same line of employment.

The advances became operative for the week beginning March 1, and are to be taken into account in the calculation for overtime and Sunday work where extra payment was made for such work. All existing bonuses will be taken into account in the calculation of payment for overtime and Sunday work.

The advances thus made are to be regarded as war wages and recognized as due to and dependent upon the existence of the abnormal conditions now prevailing in consequence of the War.

So far as Nottingham is concerned the award means an advance of 5s. 8d. [$1.38] to the men over 18 years of age employed by the Nottingham corporation tramways, as they had previously received in bonuses since the outbreak of the War an aggregate of 14s. 4d. [$3.49]. The women, whose total bonuses heretofore have amounted to 6s. 6d. [$1.58] will be increased to the extent of 6s. 4d. [$1.54], as they have not been receiving the same rate of war bonuses as the men.

Prior to the War the motormen employed by the Nottingham tramways were paid wages ranging from $6.84 to $8.67 per week of six days, and the conductors were paid $6.96 to $8.26 for the same period. Under the award recently made by the Committee on Production the weekly wages to be paid to the Nottingham tramway employees will be as follows:

Motormen	$11.70 to $13.53
Conductors	11.82 to 13.12
Conductors (women)	10.08 to 11.38

The above figures are based upon a week of six days and do not take into consideration Sundays and overtime, for which the employees are paid an additional amount based upon the above rates.

The increases above mentioned affect about 450 employees of the Nottingham tramways, of whom about 180 are women.

WAGE INCREASES IN BORDEAUX.

An average increase of 165 per cent in the prices of food and the necessaries of life since 1913 compared with a rise in wages averaging only 43 per cent is the interesting statement contained in a communication from the American vice consul at Bordeaux (France) writing under date of February 25, 1918. A table is furnished, compiled by the labor unions, indicating the daily rates of wages in 1913 and 1918 and the per cent of increase in the latter year, the conversions into American equivalents in 1913 being based on 5.18 francs per dollar and in 1918 on 5.70 francs per dollar.

DAILY RATES OF WAGES IN SPECIFIED TRADES IN BORDEAUX (FRANCE), 1913 AND 1918.

Trade.	Daily rate of wages.[1]		Per cent of increase, 1918 over 1913.[2]	Trade.	Daily rate of wages.[1]		Per cent of increase, 1918 over 1913.[2]
	1913	1918			1913	1918	
Coopers	$1.25	$1.75	40	Sawmill workers	$1.16	$1.58	36
Chemical workers	.97	1.32	36	Typesetting machine operators	1.25	1.46	17
Dyers, cleaners (men)	1.01	1.27	26	Bakers	1.06	1.23	16
Dyers, cleaners (women)	.43	.59	37	Tinners (smiths)	1.11	1.58	42
Saddlers, harness	1.01	1.36	35	Compositors (type)	1.19	1.46	23
Women garment makers	.48	.61	27	Lithographers	1.35	1.46	8
Cement workers	1.35	1.75	30	Boxmakers	.96	1.58	65
Stonemasons	1.35	1.40	4	Lighting employees	1.06	1.39	31
Coppersmiths	1.28	1.53	20	Can makers	.79	1.19	51
Railway employees	.68	.91	34	Coal yard labor	1.50	1.75	17
Carpenters	1.16	1.75	51	Tailors	1.06	1.27	20
Match factories (men)	1.39	1.56	12	Furriers	.68	.88	29
Match factories (women)	1.00	1.15	15	Locksmiths	1.06	1.40	32
Mechanics	1.06	1.67	58				
Hoopmakers	1.29	1.97	53				

[1] Errors in conversion, as appearing in the consul's report, have been corrected in this table.
[2] Computed; this column does not appear in the report sent by the consul.

Compared with the rise in the cost of living, the wage increase is not very favorable. The scale of wages for the various trades does not at all resemble that which is effective in the United States, neither before nor after the four years of war. It must be considered, however, that both labor and living have heretofore been less expensive in France than in the United States, and may still be, though the per cent of increase in the cost of both in the two countries since the commencement of the War might be found varying to a lesser degree.

MUNICIPAL WAGES IN AMSTERDAM.

The American consul at Amsterdam (Netherlands), on January 31, 1918, sent to this Government the following communication respecting municipal wages in that city:

The Amsterdam city authorities contemplate increasing the wages paid to both skilled and unskilled workmen in municipal employment. There is complaint that the increase is unequal among different trades and kinds of work, but nevertheless it appears that in practically all cases the proposed wages are above those paid for similar work by private employers. In comparison with the wages paid in 1916, the proposed increase for municipal workmen is from 6 to 12 per cent, and the proposed new wages average 20 per cent more than wages paid by private persons for similar work in 1916.

The proposed wages for municipal workpeople would be florin 0.33 [13 cents] an hour for unskilled and florin 0.37 [15 cents] for painters, plasterers, smiths, horseshoers, and carpenters. For extra work and overtime, these wages would be increased 5 or 10 per cent.

In factories and other private industries, wages have been advanced in effect, from time to time since the War began, by extra allowances of 5, 10, or an even greater per cent, because of higher cost of living, which arrangement leaves the rate of wages unchanged and therefore is supposed to obviate the probable difficulty of reducing wages when the cheaper time of peace returns.

ONTARIO FARM LABOR.

A plan to enlist boys for farm work in Ontario, together with a statement of the wages to be paid during the approaching season, is described by the American consul at Kingston in a statement dated March 14, 1918, as follows:

On March 18 a campaign will be started in Ontario for the purpose of enlisting boys for farm work. Last year seven or eight thousand boys were enlisted as soldiers of the soil. The boys will be available for service on the farms about April 1. It is not only boys who are to be enlisted in the cause of production. It is expected that 7,500 men will be obtained as well.

The ages of the boys will run from 15 to 19 years. Last year a minimum wage of $12 per month was fixed for these in advance. The average wages actually paid was $18, with some getting as much as $30, and in one or two exceptional cases $35 or $40. This year the minimum wage is fixed at $15, the boys to serve at least three months and in as many cases as possible for the whole season.

Men sent out from the cities last spring received at the start $25 to $40, but this year the suggested minimum is $40, and it is expected that as much as $60 will be paid in some cases. The work of securing and distributing this labor is carried out under the auspices of the Ontario Government Public Employment Bureau. In 1917, 1,245 girls from Ontario cities took part in farm work. This year it is hoped that the number will be 5,000. Under present arrangement girls and women registered for three classes of employment; for work in the fields, for housework on the farms, and for a combination of both, with a further division that girls will be expected to go to the fruit farms of the Niagara district.

The girls who are to go out for general farm work have been given a preliminary training by spending an afternoon a week on farms near cities, where they are shown how to harness horses, drive, clean stables, etc.

The terms of employment have not been definitely decided upon in the case of these girls, but it is believed that a reasonable arrangement would be about 10 hours a day. The matter of remuneration will probably be about $15 a month, including board. In the case of girls going out to fruit farms, where houses are available girls will be grouped in these, and where houses can not be had tents will be put up, each tent providing living quarters for three girls.

Fruit packers are to be guaranteed $1 per day, rain or shine. When on piecework 2 cents per box is to be paid for picking strawberries, 3 cents for raspberries, 2 cents for blackberries or small gooseberries, 20 cents for 11-quart basket of cherries, 40 cents for black currants, and 20 cents for red currants. When picking pears, peaches, plums, apples, or grapes, $9 a week is to be paid or 20 cents an hour for extra good pickers. For hoeing the wage is to be 15 cents an hour.

INCREASE OF SALARIES OF PERSONS IN CIVIL SERVICE IN FRANCE.

The President of the Republic of France recently (Feb. 18, 1918) signed a decree which to some extent modified the classification of the employees in the Department of Agriculture [1] and increased the salaries of all grades except the entrance salary. The increases are not to be considered as advances from one grade to another, nor does the present classification in any manner influence the automatic pro-

[1] Journal Officiel de la République Française, Feb. 20, 1918, p. 1733. Paris.

motions from grade to grade. All such promotions are to be based upon the date of the last promotion.

The new classification and salary increases became effective as of July 1, 1917. The increases are as follows:

SALARIES OF EMPLOYEES IN THE DEPARTMENT OF AGRICULTURE IN FRANCE.

Classification.	Salaries of—							
	Bureau chiefs.		Assistant bureau chiefs.		Special agents.[1]		Clerks.	
	Former.	July 1, 1917.	Former.	July 1, 1917.	Former.	July 1, 1917.	Former.	July 1, 1917.
Class exceptional[2]		$2,316		$1,544.00				[3]$1,158.00
First class	$1,930	2,123	$1,351.00	1,351.00	$1,351.00	$1,447.50	$965.00	[3] 1,061.50
Second class	1,737	1,930	1,158.00	1,254.50	1,158.00	1,351.00	868.50	[3] 965.00
Third class	1,544	1,737	1,061.50	1,158.00	1,061.50	1,254.50	772.00	[3] 868.50
Fourth class	1,351	1,544	965.00		965.00	1,158.00	694.80	[4] 772.00
Fifth class					868.50	1,061.50	617.60	[5] 675.50
Sixth class						965.00	540.40	[6] 579.00
Seventh class							482.50	[7] 482.50
New appointees							386.00	386.00

[1] Property clerk, cashier, and librarian.
[2] New classification.
[3] New classification; principal clerks.
[4] New classification; clerks, class 1.
[5] New classification; clerks, class 2.
[6] New classification; clerks, class 3.
[7] New classification; clerks, class 4.

The salaries are exclusive of all bonuses, but no extra pay is allowed for extra hours nor for any indemnities unless in conformity to ministerial decrees.

Similar decrees followed, covering the department of public works and transports (Mar. 4, 1918) [1] and the keeper of seals, minister of justice and of finance (Mar. 13, 1918),[2] effective as of July 1, 1917.

In the department of public works, etc., the increases granted are generally 1,000 francs ($193), and for clerks they vary from 100 francs ($19.30) in the lowest grade to 500 francs ($96.50) for the first class per year. A new grade is made in the clerks' class at a salary of 6,000 francs ($1,158). The salary of class 1 under the former scheme was 5,000 francs ($965).

In the last decree above noted an exceptional grade is created in each of the classifications of chiefs, assistant chiefs, and principal clerks. The exceptional grades carry increases of 2,000 francs ($386), 1,500 francs ($289.50), and 1,000 francs ($193) over the former highest-paid grades in each class, respectively.

Salaries of assistant chiefs of bureaus of grades 1, 2, and 3 are advanced 1,000 francs ($193), of chiefs of bureaus of grades 1, 2, and 3 are advanced 2,000 francs ($386), and the fourth class is paid 8,000 francs ($1,544), being 1,000 francs ($193) more than was formerly paid the next higher grade (third). Principal clerks and clerks are granted an increase of 500 francs ($96.50) in each grade.

[1] Journal Officiel de la République Française, Mar. 6, 1918, p. 2130. Paris.
[2] Idem, Mar. 15, 1918, p. 2372.

WOMEN IN INDUSTRY.

WOMEN IN THE MUNITION TRADES IN GREAT BRITAIN.

BY MARY CONYNGTON.

In an earlier article[1] some account was given of the changes brought about by the War in the employment of women in Great Britain. In this it is proposed to deal with their experiences in the munition trades. These are selected, first, because the increase in the number of women employed was greater than in other industrial groups, and, second, because women engaged in them were mainly employed either in Government factories or in "controlled" establishments, i. e., establishments directly under the control of the Ministry of Munitions. Consequently the treatment of the women is at once more uniform, and, being a matter of official record, more available for research purposes than are their experiences in trades carried on wholly under private control.

The so-called "munition trades" include a large number of industries, since in a very general way anything the Government needs for carrying on the War is classed as munitions. The term "munition worker" is therefore an elastic one, including workers engaged in occupations as diverse as those in the manufacture of aero engines and rubber sheets, of munition cases and high explosives, of barbed wire and motor lorries, of shells and searchlights. In most of the industries covered, however, women had long been employed to some extent, though usually in a very subordinate capacity. Consequently the novelty brought about by the demands of the War was not in the employment of women, but in the kind of work to which they were put.

The question of using women in new employments was first settled for the engineering trades. At the outbreak of the War these were in the hands of skilled and highly organized men who guarded jealously the position they had won through their unions. Naturally they did not look with favor on the introduction of unskilled workers, and the splitting up of skilled jobs into a number of simple operations each of which might easily be done after a short period of training. There were protracted negotiations between the unions and the Government, ending in what is known as the Treasury Agreement of March, 1915. Under its terms the unions gave up for the period of the War all trade-union customs which might tend to

[1] MONTHLY REVIEW, April, 1918, pp. 204 to 217.

restrict output, specifically agreeing to the employment of women "under suitable conditions." In June a Ministry of Munitions, with Lloyd George at its head, was formed, and in July, 1915, the first munitions act was passed. This gave the Minister of Munitions power to declare any establishment in which munitions work was carried on a controlled establishment, and thereafter the terms of the Treasury Agreement in regard to trade-union restrictions and the employment of unskilled labor, including women, became effective for that establishment. From the date of the passage of this act the question of the employment of women on any form of munition work was settled; it was merely a matter thereafter of where they could be most effectively employed.

There are no available data to show exactly how many women entered the munition trades under this agreement, but it is known that the number is large. According to the Labor Gazette, the great majority of the women munition workers are in the metal and the chemical trades. For these it gives the following figures of increase:[1]

	Metal trades.	Chemical trades.	Both groups.
Number of females employed, July, 1914	170,000	40,000	210,000
Increase, October, 1917, in number employed	379,000	53,000	432,000
Total, October, 1917	549,000	93,000	642,000

As the total increase between these two dates in the number of women industrially employed is given as 530,000, it is evident that these two branches of the munition trades are responsible for some four-fifths of the whole increase.

Two questions suggest themselves: How were these hundreds of thousands of women secured and trained, and how did they fare in the new employments to which they rushed? As to the first, there was little difficulty about securing them. When the demand first arose, women were still suffering severely from the unemployment which followed the outbreak of the War, and the munition trades offered a welcome resource for the surplus workers. As this was absorbed and the demand continued, women came in from other trades, and from domestic service, married women who had withdrawn from industry came back, and women who had never worked for wages entered munition factories as a patriotic duty. An inquiry into the pre-war occupations of women for whom insurance books had been issued under the insurance act of 1916 showed the following facts as to workers in two groups of munition trades:[2]

[1] The Labour Gazette, London, February, 1918, p. 48.

[2] For data on which this table is based, see The Labour Gazette, December, 1917, p. 438.

NUMBER AND PER CENT, BY PREWAR OCCUPATIONS, OF WOMEN EMPLOYED IN TWO GROUPS OF MUNITION TRADES IN JANUARY, 1917.

Prewar occupation.	Women employed January, 1917, in—					
	Metal trades, excluding engineering.		Chemical trades, including small arms.		Both groups combined.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Same trade	53,249	48.1	11,634	6.8	64,883	23.1
Household duties or not previously occupied	18,927	17.1	52,407	30.7	71,334	25.4
Textile trades	3,408	3.1	6,226	3.6	9,634	3.4
Clothing trades	4,635	4.2	17,941	10.5	22,576	8.0
Other industries	12,458	11.3	20,879	12.2	33,337	11.9
Domestic service	12,502	11.3	44,438	26.0	56,940	20.2
Other nonindustrial occupations	5,449	4.9	17,079	10.0	22,528	8.0
Total insured	110,628	100.0	170,604	100.0	281,232	100.0

How far these women are representative of the whole number who came into munition work can not be known, but as they number more than a quarter of a million, they are a large enough body for the above figures to be significant. A striking feature of the table is the number coming directly from their homes, who form 25 per cent of the total, the number from domestic service, 20 per cent, and the number from nonindustrial pursuits, 8 per cent. That is, over one-half, 53 per cent, were either not gainfully employed or were in nonindustrial occupations before entering these trades.

The training given the women has changed with the changing needs of the War. At first they were employed mainly either in manual labor, which required only strength, not training, or in what might be called ordinary factory work, on which women had long been employed in other industries. For this, little instruction was needed; the woman was shown her machine, told what to do, and with little or no practice could begin work. At this time, she was very apt to be employed either as a helper to a man, or on one of a group of machines under the supervision of a skilled man. Later as the need for skilled workers became more urgent, the technical schools of the Kingdom were pressed into service for training munition workers, and the Government itself established instructional factories in which women were trained for work demanding skill and accuracy. Under this training they have shown an unsuspected capacity for mechanical work; they are already performing a variety of highly skilled operations, and the field of their activities is steadily extending.

WAGES OF WOMEN UNDER THE MUNITIONS ACTS.

The question of how women fared in these new occupations is largely a matter of the special provisions of the munitions acts. The Treasury Agreement under which they first entered the engi-

neering trades was superseded in July, 1915, by the first Munitions of War Act. Under this strikes and lockouts in munitions works were illegal, a system of arbitration tribunals being established to which all disagreements regarding wages and trade customs must be referred for settlement. The Minister of Munitions was given power to declare any establishment in which munition work was carried on a controlled establishment, and to sanction for it rules and regulations ordinarily prepared by the employer; after this sanction, violation of the rules became an offense punishable by fine inflicted by the munitions tribunals, also established by the act. Still further, the minister might designate certain classes of establishments, and thereafter any worker on munitions in these establishments must procure from his employer a leaving certificate before giving up his job. Unless he could show such a certificate, it was unlawful for any other employer to hire him until after a lapse of six weeks.

The wages question came to the front almost immediately. To a large extent the women went into the factories at the rates for women and girls prevailing before the War began. With the rise in the cost of living, these rates soon became wholly inadequate. Under the munitions act it was almost impossible for the women to secure any improvement in their situation by their own efforts. To strike or to threaten to strike was illegal, and they could not even give up their work, if they were dissatisfied, without facing the penalty of six weeks of unemployment—a penalty which for many of them was absolutely prohibitive.[1] True, they had the right, if they wished an increase of wages, to apply to the arbitration tribunals, but this was a long and tedious process. One of their leaders, writing nearly a year after the passage of the munitions act, thus describes the method of procedure:

> First of all, the workers formulate their claim; the union then makes the claim on the employer; the employer ignores it. We write a firmer letter; the employer then replies that he can not consider the claim. We refer it to the committee on production, and that department writes to the employer, suggesting local conference. The employer then sends an alteration of the claim—concedes a little, perhaps. That comes back to us from the committee on production. We submit it to our members. They refuse the alternative proposals. Finally it is referred by the committee on production to the wages tribunal. When the case is called we are summoned to give evidence before the tribunal. We have had to wait weeks, sometimes two or three months, for the decision. We had claims put in last October that were heard by the wages tribunal in May, 1916; we had awards in June.[2]

[1] A munitions worker might leave without penalty if her employer agreed to give a leaving certificate, but naturally it was against the employer's interest to give one if the worker was at all a satisfactory employee; and it is admitted that in the early days the leaving certificate was sometimes unjustly withheld.

[2] Hope for Society: Essays on Social Reconstruction after the War; Women in Industry, by Miss Margaret Bondfield, p. 131.

The women were practically powerless; but the Government was very unwilling to assume the responsibility of fixing wages for them. It was an admitted fact that women's wages in general had been too low to permit the maintenance of any fair standard of living; the relief committees established at the outbreak of the War found that if they paid women employed in their workshops a fair living wage they would be overwhelmed with women who had given up regular employment in order to secure this better wage. Precisely the same situation faced the Government; there was a real probability that if they fixed anything like the wage the union leaders considered fair, the disparity between the wage of women on Government work and those otherwise employed might give rise to serious industrial disturbances. Besides, the difficulty of adjusting all the varying rates with due reference to local standards, precise nature of the work, and all the special considerations which would have to be taken into account for each factory would have been enormous. After much deliberation the Government in July, 1916, came out with the principle of the standard wage for women. A pledge had been given that women engaged on the work of skilled men should receive equal piece rates with the men. Other women were divided according to whether they were doing what was known as men's work or women's work, and for each class a standard rate was fixed. The women had hoped for minimum rates, and were much disappointed at the substitution of standard rates, but the fixation of these rates was defended on the ground that this method made for industrial peace and steadiness.

If the orders had fixed minimum rates, there would have been a tendency for women to agitate that they should be increased on any and every pretext on the principle that, having got so much by no effort of their own, they should be able to double their emoluments by determined agitation. Moreover, many of the conditions under which women are employed on munitions work must necessarily be of a temporary nature and continue only for the war period. It is of advantage both to employers and employed to divide the work done by women into two broad classes, for which both parties know definitely the rate which will be paid.[1]

During 1916–17 a series of orders were issued, dealing with women's wages and based on this general principle.[2] These cover over 90 per cent of the women working in controlled establishments. No data are at hand to show the number of women in the different wage classes, and consequently it is difficult to say just what the orders have meant as to the general level of women's wages. One member of the Ministry of Munitions, speaking in this country, said that in a few exceptional cases women earned as much as $75 a week.

[1] See article, "Women's wages in munition factories in Great Britain," MONTHLY REVIEW, August, 1917, p. 121.

[2] For precise rates fixed for each class, see article referred to in preceding note.

but that on the average their earnings would be about $10 a week.[1] The Minister of Munitions himself gives a less favorable statement of the situation. Speaking of the awards concerning wages, he says:

> Some conception may be formed of the magnitude of the achievement as it affects women's wage when I say that before the War, the average wage for women employed by time rate, doing 48 hours a week, was 12s. [$2.92]. At the present time, the lowest rate for time work for adult women is 22s. [$5.35], and the average rate for women time workers is 25s. [$6.08] a week.[2]

The women's organizations are far from satisfied with the payment accorded their members, and complain that the advance in wages lags so far behind the advance in prices that the Government standard rates differ little in purchasing power from the minimum rates fixed before the War for the sweated trades. The increase from July, 1914, to June 30, 1917, in the cost of items ordinarily entering into working class family expenditures was 75 per cent,[3] so that the purchasing value of the 22s. ($5.35) minimum quoted by the Minister of Munitions was between 12s. ($2.92) and 13s. ($3.16) in prewar prices, and the 25s. ($6.08) he gave as the average rate had a purchasing value of a little over 14s. ($3.41) by the standards of 1914.

There are, however, two facts to be borne in mind concerning the Government rates for women. First, the steadiness of the work and the amount of overtime make the earnings higher than the rates would indicate. Against this must be set the admitted fact that overtime is undesirable for any workers, and especially so for women, and that unless it is very carefully controlled and limited, it is inevitably paid for later on by diminished physical capacity. For the time, however, it adds materially to earnings. Second, the rates are in general higher than those paid in uncontrolled establishments for the same kind of work. The women's organizations recognize this, and one of their demands has been that the Government rates should be extended to all women working on Government contracts, whether or not they are in controlled establishments.

HOURS.

Before the War England's legislation in regard to the work of women and children was in many respects advanced. Hours in factory occupations were strictly limited, proper intervals for meals were insisted upon, and night work was forbidden. The tremendous need for output of munitions led to relaxations in all these respects. Very soon after the outbreak of the War the Home Office began issuing

[1] From typewritten report of answers to questions by Mr. G. H. Baillie of the labor supply department of the British Ministry of Munitions, at meeting of the Philadelphia Association for the Discussion of Employment Problems, Oct. 12, 1917.

[2] British Workshops and the War; a speech delivered by the Rt. Hon. Christopher Addison in the House of Commons, June 28, 1917.

[3] The Labour Gazette, London, July, 1917, p. 237.

special orders to individual firms permitting them to employ women overtime or at night or both. According to statements made in Parliament these orders were issued in great numbers, "many thousands" having been granted during the first seven months of the War. The report for 1914 of the chief factory inspector gives a list of 3,141 firms affected by exemption orders between August 4, 1914, and February 19, 1915;[1] as orders were at first issued only for short periods, usually a month, fresh orders being given when needed, these firms alone might account for "many thousands" of such exemptions. In 1915 a new arrangement was put into effect. Orders applicable to an industry as a whole were prepared, and on application an individual employer might be permitted to take advantage of their provisions; if the Ministry felt that the urgency of his work demanded it, a special order might be issued, allowing him exemptions in excess of those embodied in the general order.

These orders were not responsible for all the overtime work which went on. For a time an impression prevailed that the factory restrictions had been laid aside altogether, and certain employers either worked overtime without securing permits, or else, having secured a special order, exceeded the exemptions allowed by it. Instances are given in which, when the factory inspectors brought suit against such offenders, the magistrates refused to inflict any penalty, on the ground that the public welfare would be injured by any interference with production.[2]

In September, 1916, the Ministry of Munitions appointed a special committee to look into the whole question of the health of munition workers and to report as to what action was needed. This committee issued a series of reports, dealing with hours, Sunday and night work, women workers, welfare work, and so on. As to hours, the committee handled the question carefully, not wishing to embarrass the Government in its task of securing sufficient munitions, but their condemnation of the existing state of affairs was emphatic. They found night work and Sunday work and overlong hours. They found three systems under which women were employed—three shifts of 8 hours each, two shifts of 12 hours, and one shift of from 13 to 14 hours. They found methods of changing shifts at the end of the week under which women were kept at work for 24 hours or longer. They found women working 70, 80, or even more hours

[1] Annual Report of the Chief Inspector of Factories and Workshops for 1914, p. 56 (Cd. 8051).

[2] For instance, on Apr. 28, 1915, the Secretary for the Home Department was asked in Parliament "whether his attention had been drawn to the legal prosecution of a firm of engineers engaged at cartridge making in Armley, Leeds, in which it was shown that a girl under 18 years of age worked from 6 a. m. on Friday till 7 a. m. on Saturday, when she met with an accident, whilst an older woman worked from 6 a. m. on Friday till 11 a. m. on Saturday; whether he is aware that the stipendiary magistrate declined to convict on the ground that he might be limiting the output of ammunition?" (Women's Trade Union Review, July, 1915, p. 23.)

weekly, and often having to spend an hour each way on the trip between home and factory. And they showed that both the workers' health and the output of munitions suffered from these conditions.

The committee recommended various alterations in the amount and kind of overtime allowed, and in September, 1916, the Home Office issued orders restricting in general the working hours of women to 60 a week, and requiring a Sunday rest or its equivalent. The general orders were not revoked, and under them special orders might still be issued, but the office wished to limit such orders to cases of extreme urgency. At the close of the year the factory inspectors reported a considerable improvement in the situation.

> There has been a notable decrease in the requests for long hours, which were common in the early months of the War. The general tendency has been to restrict the weekly hours of work to an amount very little, if at all, in excess of those allowed under the factory act, and to arrange for more elasticity in the daily limits. * * * Several employers have during 1916 expressed themselves strongly against a continuous night shift for women. In general the experience of war emergency work, far from making employers in love with extended hours, seems to be producing a contrary effect and bringing about a sense of the importance of so limiting the period of employment as not to produce any feeling of exhaustion, or even of marked fatigue. * * * Excessive overtime and Sunday labor have been checked and as nearly as possible abolished, and night employment of girls under 18 has been greatly decreased.[1]

At the present time night work for women is still used to a considerable extent. The authorities fully admit the undesirability of the practice, but say that they do not see how to get on without it; as soon as military exigencies permit they will gladly give it up. There is complaint of excessive overtime in some branches of work, but it is under regulation; the force of factory inspectors has been increased, and magistrates no longer refuse to punish on proof of violation of the factory acts. The trend now seems toward the reestablishment rather than to further relaxation of prewar standards. Nevertheless, as late as December, 1917, one of the questions asked in Parliament was whether, in view of the findings of the Health of Munition Workers Committee, the Home Secretary "will at once withdraw the general order which allows a shift of 14 hours of work for male and female young persons and boys of 14." In response, it was stated that the general order relating to munition works was under review by the Home Office and the Ministry of Munitions, but that no decision had yet been reached.[2]

GRIEVANCES CONNECTED WITH THE TRIBUNALS AND LEAVING CERTIFICATES.

Under the munitions act the owner of every controlled establishment must post rules "relating to order, discipline, timekeeping, and efficiency" conspicuously in his establishment, and thereafter

[1] Annual Report of the Chief Inspector of Factories and Workshops for the Year 1916, pp. 4, 7, 8 (Cd. 8570).

[2] Official Report of Parliamentary Debates in the House of Commons, Dec. 3, 1917, p. 39.

breaches of those rules became offenses to be punished by the munitions tribunals. No arrangement was made for giving the employees any voice in the making of these rules, but it was provided that anyone violating them should not be punished "if the munitions tribunal is satisfied that the rule is an unreasonable one, or that the person had just cause for his failure or refusal to comply with it."

The tribunals were composed of one person appointed by the Minister of Munitions sitting with two others, one representing the employers and one the employees. In practice the employees believed that their representative was overridden, and that their cases did not receive fair consideration. Even if the tribunals were entirely fair in their operation, the system involved a loss of time varying from half a day to a day for the workers accused, in addition to the fine inflicted. The feeling of unfairness which the tribunals often produced was aggravated by the fact that the employee was not free to leave his work if dissatisfied with his treatment. If an employer refused to give a leaving certificate, the employee might bring the matter before the tribunal, but again the workers felt that they did not receive fair treatment in such cases. This was particularly so among women, as at first no provision was made for women upon the tribunals or as advisers for women brought before them. Yet a woman might have good reason for wishing to leave a particular factory which she would hesitate to detail to a room full of men. Some conspicuous cases of hardship due to this cause arose, and in the amended munitions act passed in 1916 it was provided that when women's cases were heard one member of the tribunal must be a woman.

Two reports were issued dealing with the working of these tribunals during the first year of their operation. The following table gives, first, the number of cases acted on between November 29, 1915, and July 1, 1916, inclusive, and, second, the total number from the formation of the tribunals to the latter date.[1]

[1] Compiled from reports issued by the Ministry of Munitions: Return of cases heard before munitions tribunals from their inception up to and including Saturday, 27th November, 1915, and Return of cases heard before munitions tribunals from 29th November, 1915, up to and including Saturday, 1st July, 1916 (Cd. 8143 and Cd. 8360).

CASES ACTED UPON BY TRIBUNALS UP TO JULY 1, 1916.

	Number of cases.	Number of defendants.	Number convicted.	Amount of fines.
CASES ACTED UPON BETWEEN NOV. 29, 1915, AND JULY 1, 1916.				
Against workmen:				
Strike prosecutions	34	1,023	599	$3,806.76
Breaches of rules	4,284	12,004	8,633	39,498.44
Miscellaneous cases	6	7	1	9.73
Total	4,324	13,034	9,233	43,314.93
Against employers:				
Lockout prosecutions				
Illegal employment	115	115	71	2,442.50
Miscellaneous	15	15	11	70.56
Total	130	130	82	2,513.06
TOTAL CASES FROM INCEPTION OF MUNITIONS TRIBUNALS UP TO JULY 1, 1916.				
Against employees	5,138	16,706	11,656	54,198.49
Against employers	216	224	138	3,927.87

The breaches of rules for which, during this period of less than a year, the workers were penalized to the extent of £11,137 1s. 2d. ($54,198.49), included such offenses as losing time or staying away on what the worker might consider entirely sufficient grounds, or refusing to work at some especially dangerous occupation. Moreover, the feeling of the employees against the tribunals was aggravated by the fact that even those against whom the complaints were not substantiated lost their wages for the time required for the hearings. The latter does not seem to have been a trivial ground of complaint, since the above table shows that during these eleven months some 5,000 of the workers who were brought before the tribunals were found not guilty.

No data are given to show what proportion of the workers included in the above table were women. It is quite possible that they appeared only in small numbers, yet there are some indications that because of their household duties the rules, and the penalties inflicted for their infraction, bore with special hardship on women. Cases were brought up for public inquiry in which women were fined for a few hours' absence from work, although it was established that the absence was for the purpose of caring for a sick husband or little children. Such cases might be exceptional, but they gave color to the claim that the tribunals worked hardship. The Commission of Inquiry into Industrial Unrest in 1917 found among the objections urged against the tribunals in the West Midlands area the following:

(6) That fines are excessive, and especially harsh on women.

(8) That meetings are held in a law court, or even a police court, where there is an objectionable criminal atmosphere.

(9) That women particularly dislike it, and rather than face its publicity, will submit to injustice.[1]

The fundamental difficulty with the whole system lay in the leaving certificate. If a worker were free to leave a position when she disliked it, or found the work too hard or the hours too long, she might accept the liability to fines while she stayed with comparative equanimity, but when she was bound to stay whether she wished to or not, the matter took on a very different aspect. And in a large number of cases she was obliged to stay. True, she had a right to appeal to the tribunals to compel her employer to give her a leaving certificate or to grant one themselves. Frequently, however, she was unaware of this right, and even if she were aware of it and made the appeal, it was by no means certain it would be granted. The report on the cases heard before munitions tribunals, quoted above, gives the number of applications made to the tribunals for leaving certificates. From the beginning of August, 1915, when the first appeal was made, to July 1, 1916, the tribunals received 15,210 such applications. Of these 774 proved to be cases in which no leaving certificate was required,[2] 3,901 are classed as "Withdrawn, etc.," 6,528 were refused, and 4,007 were granted.[3] How many of these applications were made by women there is no means of knowing. It will be seen that more than half as many again were refused as were granted, and in some cases the refusal, although no doubt prompted by considerations of national welfare, must have seemed to the applicant purely arbitrary and unjust. Thus a case is cited of a munition worker who applied for permission to leave her employer, who was paying her 12s. ($2.92) weekly, in order to undertake the same kind of work for another employer who offered her £1 ($4.87) a week, and whose application was refused.[4] Naturally it would be difficult for such an applicant to see anything but hardship and injustice to herself in the decision of the tribunal.

The first improvement, from the women's point of view, came with the amendment of the munitions act in 1916, when it was provided that a woman must be a member of any tribunal before which a woman was tried. It was soon found that the woman member got the woman worker's side of the case more fully than the men had been able to do, and that in many cases this made all the difference between a verdict which the worker felt was just and one which left a rankling sense of unfairness. The women's trade-union journals contain frequent references to the good work done by these

[1] Commission of Inquiry into Industrial Unrest. Report of the Commissioners for the West Midlands Area, p. 6 (Cd. 8665); Bul. 237, Bureau of Labor Statistics, pp. 92, 93.

[2] There was some confusion as to the scope of the order concerning leaving certificates, and for a time there was an impression among the workers that they were required for all employed in munition work.

[3] Return of cases heard before munitions tribunals to July 1, 1916, p. 2 (Cd. 8360).

[4] The Woman Worker, London, January, 1916.

women members, and to the ways in which their understanding of the feminine viewpoint prevented the giving of verdicts which, while possibly justifiable on technical grounds, would work real hardship and create much resentment.

In 1917 two causes combined to bring about several improvements in the position of the women workers. There was an amount of industrial unrest which threatened serious trouble if not allayed; and the Government, having the munitions situation well in hand, felt that concessions which hitherto it had not ventured to try might now safely be made. In August, 1917, Order 880 was issued, providing that thereafter proceedings before the munitions tribunals against anyone accused of failing to comply with shop regulations should be instituted only by the Minister of Munitions or the Admiralty or a person acting on his or its behalf.[1] This at once did away with the feeling prevalent among workers that the tribunals were often used by the foremen or employers to gratify personal spite or animosity. It was believed, too, that it would tend to reduce greatly the number of prosecutions brought. Before proceedings could be undertaken, an outside party would have to be convinced that the offense of which the worker was accused was sufficiently serious to justify bringing it before a tribunal, and this in itself would sift out many of the trivial and unreasonable cases.

Not long after this a still greater improvement, the abolition, so far as women were concerned, of the leaving certificate, was made. The order, effective October 15, 1917, in its first form provided that a worker who wished to leave employment on munitions to take up some other form of war work, might do so without a certificate under certain conditions. Before this became effective the Minister of Munitions issued a special order providing that for women a leaving certificate should not be required, even though they wished to leave in order to engage in work "which is not work on or in connection with munitions work."[2] This did away with what the women workers felt was the greatest of their grievances.

These two measures did much to improve the situation, but the women still felt that they ought to have some direct representation when matters concerning working women were under advisement. In November this desire was met by the appointment of a woman's trade-union advisory committee, consisting of representatives of the national unions which include women members, with Miss Macarthur as chairman. To this committee all questions respecting the employment of women on munitions were to be referred, and while their functions were to be only advisory, the Minister of Muni-

[1] Statutory Rules and Orders No. 880: The Munitions Tribunals Amendment (No. 2) Rules, 1917. Dated Aug. 22, 1917.

[2] Order No. 1050: The Munitions (Abolition of Leaving Certificates) Order, dated 5th October, 1917

tions, at whose request the appointments were made, expressed a cordial desire to work in close cooperation with their views. In December this committee was reported as working to secure consideration of the whole question of hours worked by women in munitions factories, and an adjustment of the wages situation. In the latter direction two changes were sought: The extension of the Government scale to all women employed on work for the Government, and, second, a consolidated order on women's wages. The first was needed because the Government orders regulating women's wages applied only to those working in controlled establishments, while women employed in other establishments on precisely the same work for the Government were left to make what terms they could with their employers. As to the second object, it was felt that a revision of the various orders respecting wages was needed, and that they should be combined into one comprehensive and consistent whole:

> The orders on women's work were made one by one as fresh emergencies arose, and in their present shape they form but a patchy and scrappy piece of legislation. To take but one instance, the time wages of women on men's work can be graded from 6d. [12 cents] an hour up to the fully skilled turner's rate, according to the nature of the work. For women on women's work one rate is prescribed, with only the narrowest of exceptions. Obviously this order is too inelastic and needs amendment.[1]

The women at this time were also putting forward a strong plea for an advance of 10s. ($2.43) per week on the lowest rate fixed, with corresponding increases on those a little higher, on the ground that this was necessary to meet the rise in the cost of living since the rates had been fixed.

As yet no information is available as to the success of these efforts. Whatever their outcome, however, the restrictions put upon the use of the munitions tribunals and the abolition of the leaving certificate have removed the chief complaint women had against their treatment under the munitions acts, and the appointment of the women's advisory committee marks a great step forward for them.

EMPLOYMENT OF MALES AND FEMALES IN CERTAIN UNITED STATES MUNITION PLANTS.

A table is presented herewith which should be of interest as showing the number of employees in certain munition plants in the United States, and the proportion of males and females employed at different dates during the last few years. The per cent of increase or decrease in the numbers of male and female employees as compared with each preceding date is also shown.

[1] The Woman Worker, London, November, 1917, p. 8.

EMPLOYMENT OF MALES AND FEMALES IN CERTAIN MUNITION PLANTS OF THE UNITED STATES, AT SPECIFIED DATES.

Establishment.	Date.	Persons employed.					Per cent of increase (+) or decrease (−) in number of employees as compared with each preceding date.		
		Males.		Females.		Total.			
		Number.	Per cent.	Number.	Per cent.		Males.	Females.	Total.
No. 1	May 13, 1916	6,952	69.0	3,118	31.0	10,070	.....	.....	.....
	Jan. 13, 1917	6,657	66.3	3,391	33.7	10,048	− 4.2	+ 8.8	− 0.2
	Jan. 12, 1918	6,367	63.8	3,610	36.2	9,977	− 4.4	+ 6.5	− .7
	Feb. 16, 1918	7,157	63.8	4,058	36.2	11,215	+ 12.4	+ 12.4	+ 12.4
No. 2	Nov. 18, 1916	9,924	100.0	.....	.....	9,924	.....	.....	.....
	Mar. 10, 1917	9,382	95.7	423	4.3	9,805	− 5.5	.....	− 1.2
	Aug. 18, 1917	12,246	92.4	1,009	7.6	13,255	+ 30.5	+138.5	+ 35.2
	Oct. 20, 1917	12,151	90.7	1,241	9.3	13,392	− .8	+ 23.0	+ 1.0
No. 3	July 15, 1917	7,653	82.9	1,582	17.1	9,235	.....	.....	.....
	Jan. 12, 1918	10,987	79.2	2,893	20.8	13,880	+ 43.6	+ 82.9	+ 50.3
No. 4	Jan. 1, 1917	458	77.6	132	22.4	590	.....	.....	.....
	Jan. 1, 1918	341	64.1	191	35.9	532	− 25.5	+ 44.7	− 9.8
No. 5	July 1, 1914	53	57.6	39	42.4	92	.....	.....	.....
	July 1, 1915	51	60.0	34	40.0	85	− 3.8	− 12.8	− 7.6
	July 1, 1916	59	59.6	40	40.4	99	+ 15.7	+ 17.6	+ 16.5
	Sept. 22, 1917	44	55.7	35	44.3	79	− 25.4	− 12.5	− 20.2
No. 6	Mar. 13, 1915	57	78.1	16	21.9	73	.....	.....	.....
	Jan. 15, 1916	105	47.3	117	52.7	222	+ 84.2	+631.3	+204.1
	July 1, 1916	147	27.3	391	72.7	538	+ 40.0	+234.2	+142.3
	Nov. 31, 1917	424	41.5	598	58.5	1,022	+188.4	+ 53.1	+ 90.0
No. 7	Dec. 19, 1914	588	53.5	511	46.5	1,099	.....	.....	.....
	Dec. 18, 1915	3,694	57.6	2,722	42.4	6,416	+528.2	+432.7	+483.8
	July 1, 1916	4,568	58.5	3,237	41.5	7,805	+ 23.6	+ 18.9	+ 21.6
	Nov. 24, 1917	4,614	60.9	2,963	39.1	7,577	+ 1.0	− 8.5	− 2.9
No. 8	Jan. 6, 1917	818	94.2	50	5.8	868	.....	.....	.....
	Sept. 8, 1917	192	80.0	48	20.0	240	− 76.5	− 4.0	− 72.4
No. 9	Jan. 1, 1916	162	81.4	37	18.6	199	.....	.....	.....
	July 1, 1916	286	72.0	111	28.0	397	+ 76.5	+200.0	+ 99.5
	Jan. 6, 1917	378	77.1	112	22.9	490	+ 32.2	+ .9	+ 23.4
	Sept. 15, 1917	86	82.7	18	17.3	104	− 77.3	− 83.9	− 78.8

SHOP UNIFORMS FOR WOMEN MUNITION WORKERS.

The practicability of protective clothing for women and girl workers having been demonstrated in British industries,[1] particularly in munition factories, a similar experiment is being tried under the direction of the War Department at the Frankford Arsenal where the women workers are being clothed in uniforms characterized by safety features which make them practicable for wear at work which involves danger either from the operation of machinery or the handling of explosive powders. The style of the uniform, to be made of khaki, was determined by a committee of women workers at the Frankford Arsenal, and Mrs. Clara Tead, of the Women's Division of the Ordnance Office. The following description of the uniform is taken from the Official Bulletin for April 10:

[1] See article on "Protective clothing for women and girl workers in Great Britain" in the April, 1918, issue of the MONTHLY REVIEW (pp. 217 to 219).

It consists of a blouse and specially designed overalls which are made full and button around the ankles. In order that there may be no place in the uniform for powder or flying dust to lodge, the blouse buttons over the overalls instead of under; the overalls button forward instead of backward; the collar of the blouse buttons tightly as does the flap of the overall pocket. Puttees may be worn with the overalls. The cap which completes the costume is of lighter fabric than khaki and resembles an aviator's cap in shape.

As the Frankford Arsenal employs the largest number of women of any of the Government plants, the women at this arsenal will be the first to appear in it. As soon as possible the uniform will be put into use in all Government munition plants.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

TRADE AGREEMENTS IN THE STOVE INDUSTRY.[1]

BY BORIS EMMET, PH. D.

INTRODUCTION.

The conference agreements in the stove-molding industry represent a growth extending over 26 years. The first agreement, which was signed in 1891, recognized the advisability of dealing collectively with the molders by means of conference committees based upon the principle of conciliation, and specified the procedure to be followed in the adjustment of grievances which might arise. The employers, moreover, promised not to lock out their employees while difficulties were being adjusted. In return for these concessions the molders' union agreed to refrain from striking pending the peaceful adjustment of their grievances. The matter of wages was not taken up until 1892. It was then agreed that a rate of wages once established was to be in operation for a full year, and that either party desiring a change was to notify the other at least thirty days before the expiration of the year. In the absence of such notice the wage rates for the coming year were to remain the same.

The conferees of joint annual sessions of 1893 and 1896 made persistent efforts to determine the methods to be followed in piece-rate determination. The problem of discounts for losses caused by bad work on account of "dull iron"—an important issue in the molding of stoves—was first taken up in 1896, then again in 1906, and finally settled in 1910, in the manner described below. The problem of the hours of labor of molders was first taken up in 1902. Discussions bearing on this subject have taken place at almost every one of the joint sessions since then. The question of limitation of the output which began to be discussed as early as 1898 was settled in 1902 when the union placed itself on record as being opposed to any form of limitation of output in any of the branches of the stove-molding craft. This declaration was preceded by a statement on the part of the foundrymen to the effect that in the future the earnings of molders will exercise no influence upon piece prices. The apprenticeship question which for a long time constituted a grave point of contention between

[1] For valuable suggestions given in connection with the preparation of this report acknowledgment is due to Mr. John P. Frey, editor of the International Molders' Journal.

the foundrymen and their molders was finally settled in 1905 by the adoption of clause 21 which established a ratio of one apprentice to each five journeymen. This arrangement is in force at the present time.

Three great problems have been solved since 1906. These problems dealt with: (1) The introduction of molding machines, with particular reference to piece rates on machine work; (2) the admission of the core makers into the jurisdiction of the trade agreements; and (3) the establishment of a minimum daily wage for molders working by the day. The meaning of these problems and detailed descriptions of how they were solved are given elsewhere in this article.

CHARACTER OF THE AGREEMENTS.

The trade agreements in force in the stove-molding industry are known in the trade as "conference agreements." The parties concerned are the International Molders' Union of North America and the Stove Founders' National Defense Association. The agreements are signed for one year and are subject to change and modification by the annual joint conferences of the parties. These conferences usually consist of 12 persons, six representing each side. The delegations to the annual conferences are elected at the conventions of their respective organizations, the administrative council or executive board of each association having the power to fill vacancies or make changes. The conferees of both sides come to the annual joint sessions with full powers to act and to bind their constituents.

The annual joint conferences are legislative in character. They determine policies which are to be applied to a trade as a whole and do not endeavor to adjust difficulties which arise locally.

The primary agency for the adjustment of local grievances is a shop committee elected by the molders for the purpose of dealing with the firm regarding any controversy which might arise. Difficulties upon the disposition of which the shop committee and firm cannot agree are referred for adjudication to the national officers of the two associations. These officers or their deputies then meet on the premises where the difficulty arose for the purpose of adjusting the disputed point, in accordance with the provisions and specifications of the conference agreements. The joint action of the national officers is final and binding upon both parties.

An appeal from the decisions of the national officers may be taken to a special committee known as the conference committee, which is composed of three members from each association. The conference committee has, however, never played any important part in the adjustment of difficulties. Only three appeals have been made to it during 26 years of the operation of the conference agreements.

The entire scheme of the conference agreements is based upon the principle of conciliation and no outside party or arbitrator ever participated in the sessions of the cooperating parties at which the agreements were made.[1] A few words must be said regarding the procedure followed in the annual conferences. The usual method is for each side to present a bill of particulars of its demands in the form of resolutions. The resolutions thus presented then become the subject of debate and are discussed in a parliamentary manner. Each resolution is discussed, modified, and amended until it appears to be satisfactory to a majority of the conferees.

Not all of the resolutions adopted are immediately incorporated as integral parts of the conference agreements. This is so because very frequently the resolutions represent mere interpretations of provisions already in existence. Such interpretative resolutions are put to a use similar to that of the ordinary by-laws of a constitution. This manner of amendment explains the fact that all of the conference agreements which were adopted during 26 years do not at the present time occupy more than a few small printed pages the meaning of which is intelligible to the average conferee who is either a molder or foundryman, but in no case a lawyer. In this respect the conference agreements in the stove industry differ radically from the so-called protocols of peace of the garment trade—complicated agreements the interpretation of which calls frequently for the services of attorneys.

The powers vested in the conferees by their respective organizations are great and this fact accounts for a good many of the results achieved. Irrespective, however, of their power to act, the leaders of the respective delegations always felt that in order to make the agreements enforceable it was necessary to avoid the forcing of any conditions which the rank and file of either side were at that time unprepared to adopt. Education was imperative because the rank and file frequently had little knowledge of existing conditions in the trade as a whole and seldom understood fine points of industrial diplomacy or conciliation. Many a time "things were on the verge of a smash" because of certain demands on the part of the membership which the conferees knew could not and would not be conceded by the opposing party. This was the case in the matter of apprenticeship regulation as described in detail in an early report on Conciliation in the Stove Industry.[2] The molders' representatives in this instance were com-

[1] In this connection attention is to be called to an inaccuracy in the terminology of clause 1 of the original agreement of 1891, which clause states that "this meeting adopts the principle of arbitration in the settlement of disputes." The records of the early conferences show most conclusively that it was never the intention of the conferees to resort to arbitration as technically understood, that is, to the invocation of the assistance of an outsider, or the odd man, in the adjustment of disputed points. As a matter of fact arbitration has never been resorted to during the 26 years of the operation of the conference agreements.

[2] Conciliation in the Stove Industry, by John P. Frey and John R. Commons, Bul. 62, Bureau of Labor U. S. Department of Commerce and Labor, pp. 162-176.

pelled to play a difficult part. They knew that the foundrymen would never agree to the demand of the rank and file for an apprenticeship ratio of one to eight and yet the referendum of the members insisted upon such a ratio. The most advisable thing for the union conferees to do under such circumstances was to put off the consideration of this issue until the membership was educated to the point of understanding the real facts. This it took many years to accomplish. To the credit of the foundrymen it must be said that they understood perfectly the position in which the representatives of the men were and waited patiently until the union rank and file was educated by its representatives. Similar methods of dealing with vital problems were followed frequently by the conferees of the foundrymen. The representatives of the employers found it advisable at times to get the confirmation of their rank and file as to the specific manner of dealing with grave questions. The union delegates in such instance exhibited a "give and take" attitude and were willing to postpone the settlement of some demands until some future time.

ORIGIN AND EARLY DEVELOPMENT OF THE AGREEMENTS.

An account of the workings of trade agreements in the stove molding industry was published by the Bureau of Labor, United States Department of Commerce and Labor, in January, 1906.[1] This account described the workings of the collective-bargaining scheme in operation in this industry between the International Molders' Union of North America and the Stove Founders' National Defense Association from 1891 to about 1906. Following is an attempt to describe the workings of the trade agreements in the stove industry, known technically as the conference agreements, since 1907.

An understanding of the origin and the early development of the conference agreements is necessary to fully comprehend their later development and present status.

Prior to 1891 the stove industry was the field of intensive struggles between the molders, who had organized themselves into an international union as early as 1859, and the foundrymen, who were organized in 1884 under the name of the Stove Founders' National Defense Association. The causes which led to this warfare were numerous and covered a wide range of contentions. The question of wages was naturally one of the most contested points. Differences over the piece rates to be paid for molding were responsible for very many of the strikes and lockouts which occurred. "Discounts" for bad work frequently caused trouble. Inasmuch as molders were paid only for the good work turned out, the matter of "discounts"

[1] Conciliation in the Stove Industry, by John P. Frey and John R. Commons, part of Bul. 62.

for imperfect castings was always of vital interest to the workers. In some instances an increase in wage rate granted was easily lost because of a harsh system of discounts for imperfect work. The other principal causes of contentions are discussed below.

The conference agreement of 1891 brought the principle of collective bargaining into the stove industry. The new method of bargaining eliminated strikes and lockouts by providing means for the peaceful adjustment of any disputes which might arise. Between 1891 and 1906 the following questions were amicably adjusted by the joint conferences of delegates representing the molders and their employers: (1) Establishment of an apprenticeship ratio of one apprentice to each five journeymen molders; (2) abolition of the "buck" or "berkshire" system, which was a system forcing a molder to employ unskilled assistants to work for him on a sort of teamwork basis; this arrangement was similar to what is known as "inside teamwork" in the clothing trade and was considered obnoxious from the union point of view because of its tendency to result in a dilution of skill and in a breaking down of the apprenticeship limitations; (3) establishment of what is known in the trade as the "gangway count," a simple arrangement of having each day's work placed on a gangway running through the foundry, for the purpose of counting the day's output; (4) establishment of the practice of having the firm furnish the molders with a "price book" or a book containing all the piece rates to which the molder is entitled. The absence of the "gangway count" and of the "price book" were always fought against by the men because the lack of such provisions enabled unscrupulous employers "to cheat the molders out of the results of their labor." The establishment of the "gangway count" and of the "price book," both of which innovations were frequently objected to by some foundrymen, enabled the molder to know exactly "where he was at." Abuses similar to those which existed in the absence of the "gangway count" and "price book" intruded themselves at times in the "discounting" of imperfect work. To protect themselves against abuses of the latter kind, the molders demanded and were granted the privilege of inspecting all the bad castings before they are broken up for remelting.

The above-enumerated concessions, with that of collective bargaining, removed once for all many of the principal causes which were responsible for the bitter strikes and lockouts of the former days.

The application of collective-bargaining principles brought valuable results also to the employers. The foundrymen benefited greatly by the elimination of strikes, which fact made possible uninterrupted production. The trade agreements, and the strong disciplinary power of the union in enforcing them, made it possible for

the foundrymen to know in advance the exact labor cost for the year to come. This fact enabled them to shape their sales policies in as profitable a manner as possible. In addition to that, the union put itself on record as opposed to any limitation of output. This position was taken in exchange for a declaration officially made by the foundrymen's association to the effect that the molder's earnings will exercise no influence on the piece rates. The ban placed upon any output limitation was of importance to the foundrymen because a greater output made possible a reduction in the overhead costs of manufacture.

The agreement regarding unlimited outputs shows clearly that each side was beginning to have faith in the integrity of the other. It took years, however, to establish the conference agreements on a solid basis; that is, to educate both sides to the point where they commenced to have faith in the integrity of the opposing party and in the scheme. The old strife between the molders and the foundrymen was so bitter that neither of the sides would at first believe that the establishment of peaceful relations was possible. The conference agreements did not really achieve a permanently solid basis until about 1905. In this connection it must be stated that from the very beginning the officials of both associations endeavored to put their new relations on a solid footing. This object was rather difficult to achieve because the rank and file of both associations were impatient for results.

The tangible results of the annual conferences between 1901 and 1908, unsatisfactory in some respects, were, however, instrumental in establishing the agreements on a solid basis. No increases in piece rates were granted to the molders between 1901 and 1908. This fact gave the leaders of the foundrymen an opportunity to show to their members in a definite way the benefits of the conference agreements. During the same period conditions developed which tended to strengthen the hands of the officials of the molders' union in a similar manner; that is, by showing to their membership some valuable results. After all, and as indicated above, the piece rate paid is not the only matter of importance to the molder. The question of establishing the responsibility for unsatisfactory work was perhaps of as great importance, and in this respect the union secured valuable concessions.

RECENT DEVELOPMENT OF THE AGREEMENTS.

Since 1907 the discussions of the annual conferences of the stove industry have revolved largely around the following problems, each of which was satisfactorily adjusted by the conferees: (1) Wage rates for piece and day workers; (2) discounts for imperfect work; (3) the introduction of molding machines; (4) the extension of the juris-

diction of the conference agreements to the core makers, and (5) the hours of labor of actual molding. The manner in which each of these vital trade questions was adjusted is strikingly characteristic of the actual workings of the conference agreements, and will therefore be described in greater detail.

Wages and discounts.

The molding of stoves, ranges, and heaters has always been on a piece-work basis, the molders being paid only for the perfect work turned out. The original piece price of specific parts of stoves is known in the trade as the "board price," a term taken from the fact that the separate patterns are usually placed on a board for the purpose of assisting the molder in turning out his molds. Curiously enough the "board prices" have always remained the same. Changes in piece rates were expressed in terms of a percentage above or below the original "board price." Thus the piece rate actually paid for any year, or the net cash price, as it is sometimes called, represents the original "board price" plus or minus the so-called "percentage" specified in the agreement. The existence of a certain percentage means that to every dollar of output in terms of "board prices" this percentage is added. The percentage of 85, which is now being paid, means that for every dollar of "board prices" $1.85 will be paid to the molders.

The collective bargaining of the 20-year period ending with the year 1918 almost doubled the piece rates paid to the molders.[1]

Changes in piece rates since 1898.

Period.	Per cent over "board price."	Amount for one dollar "board price."
1898 to 1899	10	1.10
1900 to 1901	15	1.15
1902 to 1906	20	1.20
1907 to 1910	25	1.25
1911 to 1912	30	1.30
1913 to 1916	35	1.35
1917	60	1.60
1918	85	1.85

Recently a minimum daily wage was established in the stove industry. On account of the nature of their work some stove molders are paid by the day instead of by the piece. Such molders are usually engaged in the making of patterns or in the molding of odd jobs. At one of the joint conferences some years ago the conferees representing the molders suggested the desirability of establishing a

[1] The following table shows the changes in the "percentage" from 1898 to 1918. The points of departure in this table are the piece prices of 1897 which were equivalent to the old "board prices" and subsequently became the basis for adding or subtracting the annual percentages.

minimum daily wage for such workers. This suggestion came to a head at the conference of 1916 at which a daily minimum of $4.25 was agreed upon for day-working molders. This wage was based upon an 9-hour day. The mentioned minimum of $4.25 was increased to $5 by the annual conference held in December of 1917. The new rate is to be in effect during the year 1918.

As stated, the question of discounts is of vital importance to the workers. Under the wage system of the stove industry the molders' actual earnings depended upon some factors other than the so-called percentages, for the reason that molders were paid only for perfect work. The problem of equitably allocating the responsibility for the bad work has at times been almost as important to the molders as the percentage. Additional percentages gained might easily have been lost by discounts for imperfect castings, occasioned frequently by conditions outside the control of the worker, such as "dull iron" and "dirty iron."

By "dull iron" in the stove-molding trade is meant molten iron which is not fluid enough to enable the turning out of a perfect casting. "Dull iron" is frequently due to defects in the "heat," a process not within the control of the molders, and for which the molder should not be held responsible. The problem of "dull iron," however, is complicated by the fact that at times a "dull iron" condition is due to the molder's delay in pouring the metal he has in his ladle. A method, therefore, had to be established wherewith a demarcation line of responsibility for "dull iron" could be definitely determined.

The question of allocating the responsibility for bad work on account of "dull iron" first arose at the conference of 1891. No settlement, however, was then reached. Definite action on the "dull iron" question was agreed upon at the annual conference of 1896 which specified that when it is shown that the aggregate loss on account of "dull iron" amounts to 4 per cent of the total value of the molders' work in any one heat it shall be deemed a bad heat and payment shall be made for all work lost over 4 per cent. This adjustment did not prove satisfactory to the molders. At the annual conference of 1906 the union representatives asked for a modification of the "dull iron" clause of 1896. This demand became the subject of discussion, as a result of which the "dull iron" clause was amended to the effect that "when the aggregate loss from this cause is less than 4 per cent * * * and 10 per cent of the molders lose 10 per cent or more * * * then such men shall be paid for such loss in excess of 4 per cent of their day's work."

The final settlement of the "dull-iron" problem proved to be of great benefit to the molders and was considered by them as a con-

cession almost as valuable as an increased percentage. This concession, although of great value to the molders, did not appear so radical and undesirable to the foundrymen as would have been an increase in percentage. After all, the "dull-iron" concession gave the molders what they were legitimately entitled to.

"Dirty iron," which makes the production of good castings rather difficult, is due to the presence in the metal of excessive amounts of slate cinder or other foreign substances. As in the case of the "dull iron" problem the bad castings caused by "dirty iron" are frequently due to the metallurgical quality of the iron, for which the molders can not be held responsible. Often, however, bad castings supposedly due to "dirty iron" are in reality due to neglect on the part of the molder, or his lack of care, in separating the slag, which is another word for the foreign substances in the molten metal, from the metal itself.

Unlike the "dull iron" question, which was easily settled in 1906 because the foundrymen admitted the possible existence of a "dull iron" condition through no fault of the molder, the "dirty iron" problem was more difficult to solve. Foundrymen contended, and with a good deal of correctness, that iron is always "dirty" and that it is the molder's business carefully to separate the iron from the slag. In a series of annual conferences, however, the conferees representing the workers succeeded in convincing the foundrymen that even most expert and careful molders are sometimes unable completely to separate the slag from the iron and that in such instances it would be unfair to hold the molder wholly responsible for the imperfect work.

The question of establishing an equitable method for "discounting imperfect work due to 'dirty iron'" was partially solved when the foundrymen were convinced by the representatives of the molders that imperfect work of this sort was frequently due to causes outside of the control of even the most expert molder. The very nature of the "dirty iron" question, however, made it extremely difficult to draw a definite demarcation line of responsibility applicable to all instances. The difficulty was solved by the joint conference of 1910 by a provision which established the "dirty iron" question as a legitimate grievance to be adjusted locally by the shop committee of the molders in consultation with the firm, and in instances of inability to agree by the national officers of both associations.

Molding machines.

The molding machine question involved a substitution of machine for hand work and had two aspects. These were: (1) Differences of opinion as to the kind of labor which was to operate the molding machines; that is, whether skilled molders, apprentices, or unskilled

hands be allowed to work on machines; and (2) the methods to be followed in determining the piece rates on machine work.

The conferees representing the molders insisted upon having journeymen operate the machines and upon the desirability of working out some equitable method of piece-rate determination in order to give to labor some of the benefits brought about by the introduction of machinery. The union conferees endeavored, first of all, to establish the machine problem as a legitimate subject of discussion under the jurisdiction of the agreements. In this they were successful. A resolution adopted at the conference of 1905 specified that "the application of machinery be considered" in the making of piece rates. The following annual conference agreed on the kind of labor to operate the molding machines. Under this agreement molding machines were to be operated by journeyman molders or apprentices. In the event of inability on the part of the management to secure the services of journeymen or apprentices, the matter was to be submitted to the presidents of the two associations, who, upon investigation, were given the power to allow the hiring of additional apprentices over and above the established ratio.

The problem of piece-rate determination was discussed at many of the annual conferences and finally solved at a special conference held in Atlantic City in June, 1914.

The solution of the machine question was greatly accelerated by the fact that one of the subcommittees appointed to study machine piece-rate making succeeded in effecting an arrangement with one of the association foundries—the Weir Stove Co., of Taunton, Mass.—for the pricing of the firm's machine work. In connection with the pricing work at the Taunton foundry, the committee collected a considerable amount of data regarding the comparative earnings and outputs of machine and hand molders. The firm and the committee then agreed to take the average daily earnings of hand molders as the basis for piece-rate making on machine work. The average earnings, based upon what were considered typical earning periods, showed an approximate daily earning capacity of $4.75. This amount was augmented by 50 cents for the extra labor of handling the additional molds, carrying the iron to the floor and pouring it, the cutting and trimming up of the sand, the shifting of weights and sleeves, the shaking out and wetting down the sand, and the taking out and trimming of the castings—all of these representing an excess of labor above that required on similar work when made by hand. The result—$5.25—was then considered as the equivalent of the "board price," to be augmented by the existing percentage. The addition of the percentage made the daily wage for pricing machine work about $6.

Having established the basis upon which the piece-rate calculations for machine work were to be computed, the committee, by a series of tests, arrived at what it considered a fair average output on the machines. The average output divided by the basis of $5.25 gave the final piece price for machine work. Inasmuch as on the $5.25 basis the machine molder was to do the molding as well as to perform all the other supplementary labor pointed out above, it was further provided that if any of these supplementary processes are done for the molder by the firm, certain percentages are to be deducted from the established piece price. Thus, for instance, 2 per cent of the price was to be deducted if the firm carries the iron to the molder's floor, 3 per cent if it cuts and trims the sand, 4 if the weights are shifted for the molder, etc. These percentage deductions for work done for the molder by the firm did not necessarily reduce the machine operator's net earning, for when some of the specified work was done by the firm the molder was able to put up a larger number of molds.

The results arrived at the Weir establishment, which was located in Taunton, Mass., subsequently became known as the "Taunton basis." This basis, slightly modified, furnished the groundwork for the final solution of the machine problem.

Status of coremakers.

In the early foundry the molder made his own cores, but with the development of specialization there came into existence the coremaker as a separate and distinct craftsman. By 1896 the craft was fully developed and the International Coremakers' Union organized. Very soon thereafter lack of cooperation and jurisdictional disputes began to appear between the iron molders' union and the coremakers' union. The final result of these jurisdictional difficulties was that the molders, who in the earlier days objected to the admission of coremakers into their union, began to talk of amalgamation with the coremakers' organization. The outcome of this discussion was an amalgamation of the two internationals in 1903.

With the admission of coremakers into the molders' union, the question of the status of coremakers under the conference agreements arose. The foundrymen objected to the admission of the coremakers on the ground that "coremaking had nothing whatever to do with the agreements," and that, as a matter of fact, no distinct occupation of this kind existed in the industry at the time of signing the first agreement in 1891. The union conferees, however, were persistent in demanding the admission of the coremakers. The successive defeats of their coremaking proposal merely resulted in the advancement of identical proposals at the following annual joint conferences. The status of coremakers was finally defined by the annual conference

of 1916. It was then agreed to grant the union demand and to extend the jurisdiction of the conference agreements to coremakers, who were to be known thenceforth as "coremaking molders."

With the admission of the coremakers the question of setting piece rates on coremaking work arose. For this reason the conference which admitted the coremakers also appointed a special committee to investigate methods for determining coremaking prices and to establish basic rates.

Hours of labor.

The question of the hours of labor has been the subject of discussion since 1891. The conference of 1902 established a seven-hour day for actual molding. At the conference held in 1910 the molders asked for a nine-hour day as the limit for all work in foundries, on the ground that a nine-hour day was prevailing in many other trades. This proposal was not adopted. In lieu of it, however, it was agreed that after April 1, 1911, "the last ladle of iron will be given to the molder within an hour and three-quarters after the seven hours of actual molding." In 1913 the union suggested that actual molding be limited to six hours per day. This proposal failed of adoption. At the present time the actual molding hours are six and one-half. The reduction from seven to six and a half hours was agreed to by the annual conference of 1910 and constituted a compromise between the seven-hour molding day insisted upon by the foundrymen and a new demand for a six-hour molding day made by the union.[1]

JURISDICTION OF THE AGREEMENTS.

When the first joint conference with the Stove Founders' National Defense Association was held in 1891, the workers in many of the association shops were not fully organized. The initial conferences therefore decided that complete nonunion establishments should not come under its jurisdiction. After some discussion it was also agreed that "open" or partially organized shops should be subject to the agreements only in instances where a majority of the molders employed were affiliated with the union. This arrangement was further modified in 1898 when it was provided that even in open shops where union men were in the minority, the union molders were privileged to submit their grievances for adjustment in the manner indicated in the conference agreements. This understanding resulted in bringing practically all the association stove foundries under the provisions of the conference agreements. It also had a tendency to

[1] The actual molding hours do not, of course, represent all the hours worked by the molders per day. After completing the specified hours of actual molding, the molder has to finish his day's work by pouring out the metal in order to make the castings, "shaking out" the castings and doing other work connected with the finishing of the day's output. This usually takes from 1½ to 2 hours.

encourage nonunionists to join the union so that their grievances might be adjusted.

At the conference of 1900 the molders' representatives proposed that all members of the foundrymen's association recognize the union rules and regulations as binding upon their foundries. This proposal was rather novel for thus far the agreements had said nothing about foundrymen being compelled to operate under full union conditions. The chief arguments advanced in favor of instituting this kind of recognition were two in number. In the first place, it was asserted that all but 10 or 12 association members were running "practically" union shops; it was argued, in the second place, that a compulsory union shop would tend to place all foundrymen upon an equal basis. The union proposal failed of adoption because of the opposition of the foundrymen's conferees. Seven years later the foundrymen submitted a counter resolution to the effect that no molder or coremaker be refused employment or discharged from any foundry governed by the conference agreements because of membership or nonmembership in the union. Like the union proposal of some years before, this suggestion of the foundrymen failed to be adopted because of objections of the opposing delegation.

From careful perusal the minutes of the joint conference as well as of the annual reports of the union officials seem to indicate that, as a matter of fact, the delegates of the molders did not exhibit their customary tenacity of purpose in pressing the proposal for full unionization. This was due to the philosophy held by some of the leading spirits of the molders' union, a philosophy which placed little faith in labor organizations the building up of which was contingent upon the cooperation of employers. These union leaders felt that a more enduring and better disciplined organization could be built up without the assistance of the foundrymen. Judged by the developments of the later years, this philosophy proved to be correct.

The problem of union recognition gradually solved itself. With the establishment of a better understanding between the molders and the foundrymen the latter did not care to contest the gradual unionization of their plants. The mutual "give and take" exhibited at the joint conferences and the stability of the ensuing agreements have finally resulted in a tacit understanding that while nonunionists will not be prevented from securing employment, no obstacles will be thrown in the way of their speedy unionization.

The Stove Founders' National Defense Association has now a membership of 73, of which 72 maintain full union conditions in their shops. These firms employ about 10,000 molders. All of these except apprentices belong to the union. The conference agreements

regulate the ratio of apprenticeship, but not the apprentice's pay. When an apprentice finishes his four years of service he applies for admission into the union and is usually accepted as a full-fledged journeyman.[1]

CONCLUSION.

The great successes of the conference agreements were made possible by the fact that there has always been some sort of continuity in the personnel of the annual conferences. The delegations of the annual conferences have always contained men who had been representing their side for years, who knew the history of collective bargaining in the trade, and were familiar with the character of their opponents. The major part of the opposing delegations have known each other for years and faced together almost unsolvable problems which nevertheless were solved. They, therefore, developed confidence in their ability to solve the most difficult problems and in the integrity of their opponents.

The conference agreements are unique in the sense that not once in the 26 years of their existence did there arise any question which proved impossible of solution. Most delicate and vital problems, such as the regulation of apprenticeship, introduction of labor-saving machinery, limitation of output, wages, etc., have been amicably solved in a manner mutually satisfactory. The annual conferences usually consist of twelve persons, six from each side. The union delegation, as a rule, consists of two or three international officials assisted by men from the "sand heap"; that is, workers drawn from the foundry for the conference. As the "sand heap" delegates come directly from the rank and file, such a make-up of the union delegation enables it more easily to direct the actions of the union membership. The actual influence of the "sand heap" delegates consists principally in the confidence which they inspire in the workers at the foundries because of their activity as watchers of the proceedings. The real work is done by the officials of the union who have developed an expert knowledge of the trade and have become able conciliators who have the confidence of the employer's conferees. In brief, the personal equation of the conferences is one of the most determining factors in achieving results and can hardly be overestimated.

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[1] In addition to the trade agreements with the Stove Founders' National Defense Association, the International Iron Molders' Union has at the present time 91 agreements with as many stove foundries which are not affiliated with the defense association. The conditions of pay, labor, etc., imposed upon the independent foundries are equivalent to those in force in the association shops. Whenever a change is made in the conference agreements a demand for a similar change is immediately made upon the independent foundrymen. The number of molders employed in independent stove foundries is rather difficult to estimate in view of the fact that some of the independents do not confine their activities to the making of stoves. The latest estimate of the number of molders coming under the trade agreements with the independent foundries is about 5,000.

NEW AGREEMENT FOR ADJUSTMENT OF RAILROAD LABOR DISPUTES.

Recognizing the extreme importance of the speedy and equitable adjustment of any controversy that may arise between the railroads now under Government control and the various brotherhoods of employees, and in order that misunderstandings which tend to lessen the efficiency of the service may be eliminated, the Director General promulgated an order (No. 13), effective March 22, 1918, formally adopting the basis for the adjustment of railroad labor disputes arrived at in an understanding between regional directors for the railroads and the chief officers of the respective employees' organizations. This understanding provides for the appointment of a railway board of adjustment No. 1,[1] consisting of eight members, to handle all controversies growing out of the interpretation or application of the provisions of wage schedules or agreements which are not promptly adjusted by the officials and the employees of any of the railroads operated by the Government. The signers are as follows: R. H. Smith, C. H. Markham, and R. H. Aishton; regional directors for the railroads under Government control; W. S. Stone, grand chief engineer, Brotherhood of Locomotive Engineers; A. B. Garretson, president, Order of Railway Conductors; W. R. Lee, president, Brotherhood of Railroad Trainmen; Timothy Shea, acting president, Brotherhood of Locomotive Firemen and Enginemen.

The following is the full text of the agreement:[2]

1. There shall be at once created a commission to be known as railway board of adjustment No. 1, to consist of eight members; four to be selected by the said regional directors and compensated by the railroads, and one each by the chief executive officer of each of the four organizations of employees hereinbefore named, and compensated by such organizations.

2. This board of adjustment No. 1 shall meet in the city of Washington within 10 days after the selection of its members and elect a chairman and vice chairman, who shall be members of the board; the chairman or vice chairman will preside at meetings of the board, and both will be required to vote upon the adoption of all decisions of the board.

3. The board shall meet regularly at stated times each month and continue in session until all matters before it are considered.

4. Unless otherwise mutually agreed, all meetings of the board shall be held in the city of Washington, provided that the board shall have authority to empower two or more of its members to conduct hearings and pass upon controversies when properly submitted at any place designated by the board; provided further, that

[1] The board of adjustment was appointed and organized early in April. It consists of four representatives of the railroad management and four officers of the brotherhoods, as follows: Dr. C. P. Neill, manager, Information Bureau of Southeastern Railways, chairman; E. T. Whiter, assistant general manager, Pennsylvania Lines West; John G. Walber, secretary, Bureau of Information of Eastern Railways; J. W. Higgins, executive secretary, Association of Western Railways; L. E. Sheppard, vice president, Order of Railway Conductors of America, vice chairman; F. A. Burgess, assistant chief Brotherhood of Locomotive Engineers; Albert Phillips, vice president Brotherhood of Locomotive Firemen and Enginemen; W. N. Doak, vice president Brotherhood of Railroad Trainmen.

[2] Official Bulletin, Mar. 25, 1918.

such subdivision of the board will not be authorized to make final decision. All decisions shall be made and approved by the entire board, as herein provided.

5. Should a vacancy occur in the board for any cause, such vacancies shall be immediately filled by the same appointive authority which made the original selection.

6. All authority vested in the commission of eight to adjust disputes arising out of the application of the eight-hour law is hereby transferred to the railway board of adjustment No. 1 in the same manner as has heretofore been done by the commission of eight. All decisions of a general character heretofore made by the commission of eight are hereby confirmed and shall apply to all railroads under governmental operation, unless exempted in said eight-hour law. Decisions which have been rendered by the commission of eight, and which apply to individual railroads, shall remain in effect until superseded by decisions of the railroad board of adjustment No. 1, made in accordance with this understanding.

7. The board of adjustment No. 1 shall render decisions on all matters in dispute, as provided in the preamble hereof, and when properly submitted to the board.

8. The broad question of wages and hours will be considered by the railroad wage commission, but matters of controversies arising from interpretations of wage agreements, not including matters passed upon by the railroad wage commission, shall be decided by the railway board of adjustment No. 1 when properly presented to it.

9. Wages and hours, when fixed by the Director General, shall be incorporated into existing agreements on the several railroads, and should differences arise between the management and the employees of any of the railroads as to such incorporation, such questions of difference shall be decided by the railway board of adjustment No. 1, when properly presented, subject always to review by the Director General.

10. Personal grievances or controversies arising under interpretation of wage agreements, and all other disputes arising between officials of a railroad and its employees, covered by this understanding, will be handled in their usual manner by general committees of the employees, up to and including the chief operating officer of the railroad (or some one officially designated by him), when, if an agreement is not reached, the chairman of the general committee of employees may refer the matter to the chief executive officer of the organization concerned, and if the contention of the employees' committee is approved by such executive officer, then the chief operating officer of the railroad and the chief executive officer of the organization concerned shall refer the matter, with all supporting papers, to the director of the division of labor of the United States railroad administration, who will in turn present the case to the railway board of adjustment No. 1, which board shall promptly hear and decide the case, giving due notice to the chief operating officer of the railroad interested and to the chief executive officer of the organization concerned of the time set for hearing.

11. No matter will be considered by the railway board of adjustment No. 1 unless officially referred to it in the manner herein prescribed.

12. In hearings before the railway board of adjustment No. 1, in matters properly submitted for its consideration, the railroad shall be represented by such person or persons as may be designated by the chief operating officer, and the employees shall be represented by such person or persons as may be designated by the chief executive officer of organization concerned.

13. All clerical and office expenses will be paid by the United States railroad administration. The railroad directly concerned and the organization involved in a hearing will respectively assume any expense incurred in presenting a case.

14. In each case an effort should be made to present a joint concrete statement of facts as to any controversies, but the board is fully authorized to require information in addition to the concrete statement of facts, and may call upon the chief operating

officer of the railroad or the chief executive officer of the organization concerned for additional evidence, either oral or written.

15. All decisions of the railway board of adjustment No. 1 shall be approved by a majority vote of all members of the board.

16. After a matter has been considered by the board, and in the event a majority vote can not be obtained, then any four members of the board may elect to refer the matter upon which no decision has been reached to the Director General of Railroads for a final decision.

17. The railway board of adjustment No. 1 shall keep a complete and accurate record of all matters submitted for its consideration and of all decisions made by the board.

18. A report of all cases decided, including the decision, will be filed with the director, division of labor of the United States railroad administration; with the chief operating officer of the railroad affected; the several regional directors; and with the chief executive officers of the organizations concerned.

19. This understanding shall become effective upon its approval by the Director General of Railroads and shall remain in full force and effect during the period of the present war, and thereafter, unless a majority of the regional directors, on the one hand, as representing the railroads, or a majority of the chief executive officers of the organizations, on the other hand, as representing the employees, shall desire to terminate the same, which can, in these circumstances, be done on 30 days' formal notice or shall be terminated by the Director General himself, at his discretion, on 30 days' formal notice.

EMPLOYMENT AND UNEMPLOYMENT.

EMPLOYMENT CONDITIONS IN SHIPYARDS OF THE EMERGENCY FLEET CORPORATION.

AVERAGE DAILY ATTENDANCE, ALL EMPLOYEES.

In an effort to determine, at least approximately, the work-time efficiency of the labor force in the shipyards, a weekly report giving the daily attendance of all employees is required from every shipbuilding company. This report is made to the Industrial Service Department of the Division of General Service of the Emergency Fleet Corporation.

The average daily attendance for each week is calculated by adding the attendance for all the days of the week, including Sunday, and dividing by six, regardless of whether or not the company has a Sunday shift. The ratio of this average daily attendance to the total number on the pay roll, expressed as a percentage of the pay roll, gives an approximately accurate notion of the steadiness of the working force. These figures are only closely approximate, however, for the reason that an employee may be in attendance on a given day and yet not work the whole day. For one reason or another he may work only a half day or even less. These part days of idleness are not deducted in the following daily attendance tables. On the other hand, however, a great deal of overtime is common in the yards which would tend to effect these parts of days to a considerable extent.

The general averages of daily attendance for the week ending January 5 are adversely affected by the New Year holiday which fell in that week and the same is true, but to a less extent, of the weeks ending February 16 and 23 on account of the inclusion therein of the holidays, not universally observed, falling on February 12 (Lincoln's Birthday) and February 22 (Washington's Birthday).

There is a large variety of causes why daily attendance is irregular. In the winter season unfavorable weather in the northern yards, particularly on the Atlantic coast and Great Lakes, was perhaps, the chief reason. Other prominent causes have been lack of material, poor housing and transportation facilities, maladjustment of wages as between yards in the same district and immediately adjacent districts, etc. Other causes of absences universally operative in all industries include sickness, injuries, and voluntary absences for various other reasons.

In Table 1 the average percentage of the total number on the pay roll in daily attendance is compared for January and February for every district and with distinction of type of construction. The statistics show a quite general improvement (higher percentages) in February as compared with January. For 67 wood-ship building companies combined, the percentage of daily attendance was 84.2 during January and 85.8 during February. For 60 steel-ship building companies combined, the percentage of daily attendance was 78.6 during January and 82.1 during February. For the 127 shipbuilding companies (wood and steel) making reports complete enough to warrant tabulation, the average daily attendance percentage for January was 79.3 and for February 82.5.

For supervisory and general administrative purposes the shipyards of the United States in which vessels (contract and requisitioned) are being built for the Emergency Fleet Corporation are grouped in geographical divisions designated as districts.

District 1. Maine, New Hampshire and Massachusetts.

District 2. Rhode Island, Connecticut, New York, and part of New Jersey and Pennsylvania.

District 3. Delaware, Maryland, and Virginia.

District 4. The Carolinas, Georgia, and part of Florida.

District 5. Southwestern Florida, Alabama, Mississippi, and the southeastern coast of Louisiana.

District 6. Southwestern coast of Louisiana and Texas.

District 7. California and part of Oregon.

District 8. Washington, except along the Columbia River.

District 9. The Great Lakes.

District 10. The yards in and near Philadelphia, including Chester, Pa., and Camden and Gloucester, N. J.

District 11. Parts of Oregon and Washington, mainly along the Columbia River, but including Tillamook and Portland.

Fabricated[1] yards, including the Submarine Boat Corporation, Newark, N. J., the American International Corporation at Hog Island, Philadelphia, and the Merchant Shipbuilding Corporation at Bristol, Pa.

Table 1, showing the average daily attendance as compared with number of all employees on pay rolls of the establishments in the various districts, follows:

[1] By fabricated is meant the method of construction. Standardized parts are fabricated in various auxiliary plants and these are assembled in the fabricating yards. Assembling would more nearly describe the method of construction.

TABLE 1.—AVERAGE DAILY ATTENDANCE IN RELATION TO TOTAL NUMBER ON PAY ROLL (ALL EMPLOYEES), JANUARY AND FEBRUARY, 1918.

District.[1]	Type of construction.	Number of companies reporting.	January.			February.		
			Total number on pay roll.	Average daily attendance.		Total number on pay roll.	Average daily attendance.	
				Number.	Per cent of number on pay roll.		Number.	Per cent of number on pay roll.
No. 1	Wood	7	6,698	5,896	88.0	6,222	5,219	83.9
	Steel	3	70,837	46,756	66.0	63,892	42,803	67.0
	Total	10	77,535	52,652	67.9	70,114	48,022	68.5
No. 2	Wood	7	11,525	9,176	82.4	14,424	11,139	77.2
	Steel	7	40,650	30,754	75.7	41,253	31,081	75.3
	Total	14	52,175	39,930	76.5	55,677	42,220	75.8
No. 3	Wood	5	5,706	3,500	61.3	5,236	3,696	70.6
	Steel	5	54,452	37,685	69.2	79,318	62,070	78.3
	Total	10	60,158	41,185	68.5	84,554	65,766	77.8
No. 4	Wood	8	12,832	10,955	85.4	14,703	13,282	90.3
	Steel	2	2,729	2,566	94.0	2,713	2,454	90.5
	Total	10	15,561	13,521	86.9	17,416	15,736	90.4
No. 5	Wood	6	14,107	10,975	77.6	12,938	10,350	80.0
	Steel	2	2,891	2,389	82.6	3,242	3,018	93.1
	Total	8	16,998	13,364	78.6	16,180	13,368	82.6
No. 6	Wood	9	20,149	14,914	74.0	19,417	16,086	82.8
	Steel [2]	.....	.....	.....	.....	.....	.....	.....
	Total	9	20,149	14,914	74.0	19,417	16,086	82.8
No. 7	Wood	4	5,945	5,443	91.6	5,931	5,324	89.8
	Steel	7	117,940	110,124	93.4	107,581	94,894	88.2
	Total	11	123,885	115,567	93.3	113,512	100,218	88.3
No. 8	Wood	11	18,917	17,049	90.1	19,541	17,449	89.3
	Steel	9	131,133	121,181	92.4	111,279	99,905	89.8
	Total	20	150,050	138,230	92.1	130,820	117,354	89.7
No. 9	Wood	1	858	698	81.4	604	448	74.2
	Steel	16	69,610	54,467	78.2	70,692	57,947	82.0
	Total	17	70,468	55,165	78.3	71,296	58,395	81.9
No. 10	Wood [3]	.....	.....	.....	.....	.....	.....	.....
	Steel	6	86,653	69,782	80.5	102,495	88,335	86.2
	Total	6	86,653	69,782	80.5	102,495	88,335	86.2
No. 11	Wood	9	30,872	28,753	92.7	30,956	28,574	92.3
	Steel [2]	.....	.....	.....	.....	.....	.....	.....
	Total	9	30,872	28,753	92.7	30,956	28,574	92.3
Fabricated yards	Steel	3	226,703	156,114	68.9	164,657	130,537	79.3
Grand total	Wood	67	127,609	107,539	84.2	129,972	111,567	85.8
	Steel	60	803,598	631,818	78.6	747,122	613,044	82.1
	Total	127	931,207	739,357	79.3	877,094	724,611	82.5

[1] For designation of districts see p. 184.
[2] No steel-ship building companies in this district.
[3] No wood-ship building companies in this district.

Table 1 requires no further extended comment as the figures are self-explanatory. It is interesting, however, to note that in districts 7, 8, and 11, representing the Pacific coast, the daily attendance percentage was somewhat higher in January than in February. This was also true of the wood-ship building companies in district 1, of all companies combined in district 2, of the steel-ship building companies in district 4, and of the wood-ship building companies in district 9, the Great Lakes district. In the fabricated (steel) yards the great majority of the employees were and still are engaged in yard and plant construction work. The labor force of these companies in January and February was, therefore, more largely of a casual type than was generally true of any district. In these three companies combined, however, there was a notable increase in the average daily attendance percentage, or from 68.9 in January to 79.3 in February.

In Table 2 are presented the weekly percentages of average daily attendance as measured against the total pay roll. The variations have fluctuated for the 127 companies combined from 71.9 per cent of the pay roll for the week ended January 5 to 84.3 per cent for the week ended March 2. It so happens that the aggregates for both the wood-ship building and steel-ship building companies show the most favorable (highest) percentages of total pay roll in daily attendance during the last week of the nine weeks' period under review. This indication of an improvement in attendance is confirmed by the average improvement for the month of February as compared with January and it is borne out also in a general way by the percentages in detail for the eleven districts and for the combined fabricated yards. The Pacific coast, districts 7, 8, and 11, is the notable exception, but the attendance there has been quite good, comparatively, in the winter months, largely because of the more favorable weather conditions there as compared with the Atlantic coast and Great Lakes.

TABLE 2.—AVERAGE DAILY PERCENTAGE OF ATTENDANCE IN RELATION TO NUMBER ON PAY ROLL (ALL EMPLOYEES) FOR EACH WEEK IN JANUARY AND FEBRUARY, 1918.

District.[1]	Type of construction.	Number of companies reporting.	Percentage of attendance for week ending—								
			Jan. 5.	Jan. 12.	Jan. 19.	Jan. 26.	Feb. 2.	Feb. 9.	Feb. 16.	Feb. 23.	Mar. 2.
No. 1	Wood	7	83.4	83.9	87.4	94.3	89.7	80.4	86.5	85.4	83.0
	Steel	3	53.1	69.8	68.6	69.0	68.5	58.8	72.0	65.2	71.6
	Total	10	55.5	70.5	69.6	71.2	70.4	60.6	73.3	67.0	72.7
No. 2	Wood	7	60.5	73.3	81.9	88.7	84.5	76.7	77.0	76.1	78.9
	Steel	7	54.2	75.9	82.2	80.8	76.9	71.5	75.6	75.3	77.9
	Total	14	55.7	75.3	82.2	82.6	78.8	72.9	75.9	78.0	78.2
No. 3	Wood	5	62.4	66.5	66.7	57.5	54.7	53.9	72.4	79.1	75.8
	Steel	5	53.8	65.5	78.9	74.4	72.2	76.9	78.5	75.0	82.4
	Total	10	54.3	65.6	77.5	72.6	70.5	75.6	78.0	75.2	82.0
No. 4	Wood	8	77.8	89.0	90.3	78.2	89.4	91.7	91.5	87.7	90.7
	Steel	2	93.1	98.0	89.8	96.1	93.2	93.3	90.4	88.0	90.3
	Total	10	81.0	90.6	90.2	81.3	90.0	91.9	91.3	87.8	90.6
No. 5	Wood	6	79.0	84.1	80.8	75.4	69.8	77.2	81.4	79.2	81.9
	Steel	2	77.7	89.7	76.2	79.9	88.5	96.9	91.4	90.5	94.1
	Total	8	78.8	85.2	80.1	76.2	73.2	80.8	83.4	81.5	84.5
No. 6	Wood	9	79.1	77.5	64.0	67.7	81.7	81.8	84.0	77.0	90.1
	Steel[2]										
	Total	9	79.1	77.5	64.0	67.7	81.7	81.8	84.0	77.0	90.1
No. 7	Wood	4	79.7	94.8	93.1	94.4	93.4	92.2	90.5	84.7	91.2
	Steel	7	86.6	95.8	95.6	92.8	95.4	92.3	93.4	74.3	93.6
	Total	11	86.4	95.7	95.4	92.9	95.3	92.3	93.3	74.8	93.5
No. 8	Wood	11	86.4	91.8	89.7	95.1	86.5	92.9	87.7	89.6	88.1
	Steel	9	92.6	92.2	94.4	93.0	90.0	90.4	90.8	88.8	89.3
	Total	20	91.8	92.1	93.8	93.3	89.6	90.7	90.4	88.9	89.1
No. 9	Wood	1	70.3	78.3	86.9	91.3	80.0	72.7	79.1	57.8	90.9
	Steel	16	74.4	74.4	78.9	83.6	78.5	81.5	81.8	79.9	84.8
	Total	17	74.4	74.5	79.0	83.7	78.5	81.4	81.7	79.8	84.8
No. 10	Wood[3]										
	Steel	6	61.4	80.6	83.2	85.2	87.3	83.7	88.5	85.0	87.3
	Total	6	61.4	80.6	83.2	85.2	87.3	83.7	88.5	85.0	87.3
No. 11	Wood	9	82.1	94.7	97.5	95.9	92.1	86.6	93.6	95.6	93.0
	Steel										
	Total	9	82.1	94.7	97.5	95.9	92.1	86.6	93.6	95.6	93.0
Fabricated yards	Steel	3	66.5	62.5	73.4	69.5	72.5	73.5	81.5	78.4	83.5
Grand total	Wood	67	78.7	85.9	85.0	84.9	84.6	83.9	86.5	85.2	87.6
	Steel	60	70.9	76.7	82.2	79.0	78.5	77.7	82.8	79.6	83.7
	Total	127	71.9	77.9	82.5	79.9	79.5	78.7	83.5	80.6	84.3

[1] For designation of districts, see p. 184.
[2] No steel-ship building companies in this district.
[3] No wood-ship building companies in this district.

LABOR TURNOVER AMONG SHIPBUILDING EMPLOYEES.

Briefly stated, the method of calculating labor turnover percentage is as follows:

For January, when full reports were available, five weeks have been taken and for February four weeks. To calculate the labor turnover percentage for a five-weeks period, the numbers of shipbuilding employees on the pay roll for each of the five weeks were added and the sum was divided by five to get the average number on the pay roll for January. Similarly, for February the pay-roll figures for four weeks were added and the sum divided by four to get the average number on the pay roll. The average number of shipbuilding employees on the pay roll divided into the number of shipbuilding employees replaced during a given period gives the turnover percentage for the period. To reduce the monthly turnover percentage to a yearly basis for purposes of uniform comparison the monthly percentages are multiplied by the factor 10.4 (that is, 52 divided by 5) when five weeks are included in the month, and by 13 (that is, 52 divided by 4) when four weeks are included in the month.

On an increasing pay roll, the number of men replaced would be represented by the number lost from the pay roll; on a decreasing pay roll, the number of men replaced would be represented by the total number hired during the period under observation.

This is the method that has been followed in the preparation of Table 3, which shows the comparative turnover percentages of shipbuilding employees for 116 companies summarized by districts and with distinction of wood and steel types of construction.

Considering the grand totals, the 63 wood-ship building companies combined show a turnover percentage for shipbuilding employees, yearly basis, of 178 in January and 177 in February—practically the same for both months. The 53 steel-ship building companies combined show a labor turnover percentage of shipbuilding employees of 202 in January, on a yearly basis, as against 207 in February. In other words, the turnover was somewhat lower for the wood-ship builders than for the steel-ship builders and in neither case was there much change in February as compared with January when only the aggregate totals are considered.

The table in detail shows many variations. In January the turnover percentage varied from 68 for the two small steel-ship building companies in the fourth district to 287 for the three fabricated yards combined and 257 for the 6 wood-type yards combined in the fifth district. In February the variations in the turnover percentages were of equally wide range. When the analysis is carried further and the turnover percentages are calculated for the several companies individually the differences and variations are still more striking and are of wider range.

TABLE 3.—YEARLY LABOR TURNOVER FOR SHIPBUILDING EMPLOYEES, BASED ON JANUARY AND ON FEBRUARY, 1918.

District.[1]	Type of construction.	Number of companies reporting.	January.			February.		
			Average number on pay roll.	Number replaced.	Per cent of turnover (yearly basis).	Average number on pay roll.	Number replaced.	Per cent of turnover (yearly basis).
No. 1	Wood	8	1,534	374	254	1,243	155	163
	Steel	3	13,126	1,709	135	14,732	1,655	146
	Total	11	14,660	2,083	148	15,975	1,810	147
No. 2	Wood	5	1,138	172	157	2,712	505	242
	Steel	4	6,210	2,116	355	7,153	1,241	225
	Total	9	7,348	2,288	323	9,865	1,746	229
No. 3	Wood	5	769	142	192	873	128	191
	Steel	6	17,626	3,209	189	21,029	2,893	180
	Total	11	18,395	3,351	189	21,902	3,021	180
No. 4	Wood	6	1,841	173	98	2,642	208	103
	Steel	2	511	33	68	556	41	96
	Total	8	2,352	206	92	3,198	249	101
No. 5	Wood	6	1,588	393	257	2,301	419	241
	Steel	2	356	31	90	419	76	235
	Total	8	1,944	424	227	2,720	495	237
No. 6	Wood	9	3,433	760	230	4,615	810	229
	Steel[2]	.....	.....	.....	.....	.....	.....	.....
	Total	9	3,433	760	230	4,615	810	229
No. 7	Wood	4	1,016	151	155	1,351	184	177
	Steel	7	19,154	4,490	243	23,035	5,442	307
	Total	11	20,170	4,641	239	24,386	5,626	300
No. 8	Wood	8	2,873	517	187	3,433	603	228
	Steel	7	25,078	4,336	180	29,280	4,047	179
	Total	15	27,951	4,853	181	32,713	4,650	185
No. 9	Wood	1	171	19	115	151	4	34
	Steel	14	12,734	2,620	214	13,762	2,097	198
	Total	15	12,905	2,639	212	13,913	2,101	196
No. 10	Wood[3]	.....	.....	.....	.....	.....	.....	.....
	Steel	5	12,943	2,214	178	14,231	2,188	200
	Total	5	12,943	2,214	178	14,231	2,188	200
No. 11	Wood	11	6,275	842	139	7,552	618	107
	Steel[2]	.....	.....	.....	.....	.....	.....	.....
	Total	11	6,275	842	139	7,552	618	107
Fabricated yards	Steel	3	1,202	332	287	1,898	300	205
Grand total	Wood	63	20,638	3,543	178	26,673	3,634	177
	Steel	53	108,940	21,090	202	126,095	19,980	207
	Total	116	129,578	24,633	198	152,768	23,614	202

[1] For designation of districts, see p. 184.
[2] No steel-ship building companies in this district.
[3] No wood-ship building companies in this district.

A large labor turnover always represents heavy economic loss, through reduction of efficiency, loss of work-time, other expense and waste involved in the replacement of men, and the consequent

slowing down of production. Like daily attendance, labor turnover is due to many causes most of which operate more intensively on casual than upon skilled labor. A high labor turnover, however, among skilled workmen entails heavier losses upon production than an equal turnover among the unskilled and, perhaps, almost in direct proportion to the relative skill of the labor. It is important, therefore, that the turnover of shipbuilding employees be reduced to the lowest percentage possible and that every effort be made by employers, employees, and governmental agencies to bring this about.

During the recent winter a large part of the labor turnover, particularly on the Atlantic coast and Great Lakes, was due to the severe weather conditions which, in many instances, made it impossible for men to work in the open on building operations. Lack of proper and adequate housing and transportation facilities in many of the shipbuilding centers has also contributed largely to bring about the relatively high labor turnover still existent in several of the shipbuilding yards. Maladjustment of wages, too, has in several instances favored the so-called "scamping" of labor. This latter factor has induced a comparatively large number of men to quit work in one yard and move to another to accept higher wages. It has also affected daily attendance by encouraging certain of the men to take a day or two off to seek a job elsewhere at higher wages or under alleged or supposedly better conditions in other respects, such as hours of work, better work and living conditions, etc. Fortunately, the Labor Adjustment Board has recently handed down its decision in reference to wages, hours of labor, and certain other conditions, making these uniform and standardized, so far as possible, for the North Atlantic and Gulf coasts.[1]

The necessary dilution of shipbuilding labor has operated also to some extent to increase the labor turnover. This has inevitably resulted in the recruiting of a considerable proportion of untrained, inefficient, and discontented laborers. One of the promising remedies for this temporary condition is the instruction and training of the "green" labor in the yards. This training work is rapidly improving as more and more of the experienced foremen are taught just how best to impart the necessary instruction to the men under their supervision. The schools located at Newport News and at Philadelphia aim to do just this. The recently opened six weeks' intensive course in employment management at the University of Rochester is designed to give special training in scientific employment methods to carefully selected men so that the employment departments of factories and plants, including shipyards, engaged on Government war contracts may be able to deal more efficiently with

[1] See pp. 130 to 142.

all the problems with which such departments are confronted. One of the primary aims is to teach employment managers how to select men and assign them to the jobs for which they are best fitted. The more thoroughly employment managers are trained in this direction, the less likely that labor turnover will be traceable to improper and unintelligent methods of employment. A similar course is planned for Harvard and other universities. All of these really constructive efforts to improve the efficiency and contentment of labor operate also to reduce labor turnover.

The local housing and transportation difficulties are being solved as rapidly as is humanly possible in view of the size of the problems involved. There is good reason to hope that in a very few months most of these particular handicaps will be removed.

Not a small part of the labor turnover during the winter months was due to lack of material in the yards for men to fabricate into ships. The shortage of material was in some instances so serious and the delays in delivery so long that employees were let go and had to be replaced when the material finally arrived. This lack of material was in turn often due to a variety of reasons, the principal one being the unusually severe weather conditions, coal shortage, and the badly handicapped railway facilities. These obstacles have now been either entirely removed or the earlier conditions have recently been greatly improved.

In conclusion it may be said that the labor force in the American shipyards, as measured by percentages of average daily attendance and turnover, is certain to become increasingly powerful, efficient, and productive. The constructive program for bringing this about is well under way and there is every reason to believe that in this crisis American labor will do its full and big part and will see to it that the "bridge of ships" is speedily built and kept in good repair.

HOW THE UNITED STATES EMPLOYMENT SERVICE IS MOBILIZING WORKERS.

BY C. F. STODDARD.

Getting the job and the man together is the chief function of the United States Employment Service, recently established in the Department of Labor under the direction of John B. Densmore, formerly solicitor of the department, as director general. State, municipal, and county employment offices have been operated in many States during recent years to take care of demands more or less local, but in the present war emergency, when industries are calling for more labor than can be supplied locally, it is imperative that employment activities on a huge scale should be brought under one coordinating authority in order that the needs of industry may be adequately

served and the prosecution of the War forwarded with all possible speed and efficiency. To work in harmony with existing agencies in the various States and to exercise directing authority, as well as to afford a medium through which all demands for labor and requests for positions may be cleared, is the purpose for which the United States Employment Service was organized.[1]

Under its mobilizing and distributing plan the State services are becoming component parts of a national system of labor exchanges, known as the Federal Employment Service under the central supervision of the Department of Labor, but State services joining the federated system do not lose their identity. In the States thus cooperating, employment directors, subject to general supervision by the Director General, through the district superintendents, have been appointed, being generally designated upon recommendation of the council of national defense of each State and after approval by organized capital and labor. In many States the operations of the combined State and United States employment services are directed by a Federal director of employment, appointed by the Department of Labor, with an assistant in management known as the associate director of employment, who is also designated upon the recommendation of the council of national defense of the State. The Federal employment directors in each State, so far as appointed April 30, are as follows:

FEDERAL STATE DIRECTORS OF EMPLOYMENT.

State.	Name.	Address.
Alabama	Geo. N. Terrant	Birmingham.
Arizona	Thomas J. Croaff	Phoenix.
Arkansas	R. R. Keating	Little Rock.
Colorado	Ready Kenehan	Denver.
Connecticut	C. E. Davenport	Hartford.
Delaware	A. G. Bankhart	Wilmington.
Georgia	H. M. Stanley	Atlanta.
Idaho	M. J. Kerr	St. Anthony.
Illinois	Mark L. Crawford	Chicago.
Indiana	W. C. DeMiller	Indianapolis.
Iowa	H. J. Metcalf	Des Moines.
Kentucky	F. L. McVey	Lexington.
Maine	Chas. S. Hichborn	Augusta.
Maryland	John K. Shaw	Baltimore
Massachusetts	W. A. Gaston	Boston.
Michigan	Jas. T. Lynn	Detroit.
Missouri	W. W. Brown	Jefferson City.
Montana	Scott Leavitt	Great Falls.
Nebraska	Robert Cowell	Omaha.
New Hampshire	E. K. Sawyer	Franklin.
New Jersey	L. T. Bryant	Trenton.
New Mexico	Alvin N. White	Silver City.
New York	P. A. Donohue	New York.
North Dakota	Lindley H. Patten	Bismarck.
Ohio	F. C. Croxton	Columbus.
Oklahoma	C. E. Connally	Oklahoma.
South Carolina	H. L. Tilghman	Columbia.
Tennessee	J. T. Ware	Memphis.
Texas	H. W. Lewis	Smithville.
Utah	P. L. Moran	Salt Lake City.
Virginia	J. B. Doherty	Richmond.
West Virginia	L. B. Spaun	Charleston.
Wisconsin	Eswald Pettet	Madison.

[1] An account of the organization, including the personnel, of the service was given in the MONTHLY REVIEW for March, 1918, pp. 76 to 78.

Branch offices, each in charge of an employment agent, called an examiner in charge, are being established in each State, the number on April 30 being about 300. Through an extensive field service each community is kept in constant touch with the chief office of the Employment Service in the centers of population. Daily and weekly reports from the field, noted hereafter, keep the main office at Washington in intimate authoritative touch with the labor situation in each locality.

In addition to the Federal directors already mentioned, Government supervision is further accomplished by a division of the country into 13 employment districts, each in charge of a district employment superintendent. Primarily the purpose of this plan is to permit the more rapid and wholesale transfers of surplus labor from one section to another that has a shortage. Each district office receives reports from all the public employment offices within the district, keeps in intimate touch with employment conditions, supervises the work of State directors of employment in the States comprising the district, and supervises and carries on the fiscal operations of the service. Clearances of labor between local offices within a State are conducted through the State office, in which the State employment director makes his headquarters, and clearances between States within a district are under the supervision of the district office. Clearances between districts are made through the main office at Washington, where a clearance section has been established under the direction of I. W. Litchfield, of Boston, associate director of the Public Service Reserve. The 13 districts and the superintendents who had been designated at April 30 are as follows:

District 1.—Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island. H. A. Stevens, Boston.

District 2.—New York, Connecticut, and New Jersey. John R. O'Leary, New York.

District 3.—Pennsylvania and Delaware. John C. Saylor, Wilmington, Del.

District 4.—Ohio and West Virginia. James A. Reynolds, Cleveland.

District 5.—Maryland, Virginia, District of Columbia, North Carolina, and South Carolina. Ralph Izard, Richmond, Va.

District 6.—Georgia, Florida, Alabama, Mississippi, and Louisiana. Cliff Williams, Birmingham, Ala.

District 7.—Indiana, Illinois, Michigan, Wisconsin, and Iowa. P. L. Prentis, Chicago.

District 8.—Kentucky, Tennessee, Missouri, and Arkansas. C. C. Cavanaugh, Little Rock, Ark.

District 9.—Minnesota, North Dakota, South Dakota, and Montana.

———.

District 10.—Nebraska, Kansas, Oklahoma, Colorado, and Wyoming. A. L. Barkman, Kansas City, Kans.

District 11.—Texas and New Mexico. H. A. Lewis, Smithfield, Tex.

District 12.—Arizona, Utah, Nevada, and California. William T. Boyce, San Francisco.

District 13.—Washington, Oregon, and Idaho. Henry White, Seattle.

FORMS AND RECORDS USED.

During the fiscal year 1916–17 the United States Employment Service directed approximately 458,000 persons to employment, and it is now directing an average of 100,000 persons monthly. More than 30,000 employers are now calling upon the Employment Service each month. The War Department and the United States Shipping Board are utilizing the Employment Service in furnishing labor to industries in which they are directly interested.

When applications for work or requests for workers are received, the local agent notes on cards prepared for filing the information necessary to enable him to render the expected service. From the employer he obtains data indicated by the following card, on the reverse side of which he keeps a record of the help sent, under the captions "Persons sent," "Nationality," "Date sent," and "Result":

DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

EMPLOYER'S ORDER

NUMBER.....

Name			Date	
Address			Telephone No.	
Occupation (State exact nature of work to be done.)			Number wanted	
Wages	Hours		Probable duration of work	
Nationality	Sex	Age limit	Color	Married or single
Apply to				
Any strike or lockout existing or threatened?				

The prospective employee furnishes data which is placed on the following card, on the reverse side of which is a space for a record of the positions offered, including the name of the employer, occupation to which sent, date sent, and the result:

Name				Telephone No.	Date
Address				Willing to work out of town?	
Occupation			Wages wanted	Number of dependents	
Also willing to work as—			Wages wanted	Married Single Widowed	Speak English Read English Write English
Age	Race	Birthplace		Citizen of U. S.	How long in U. S.?
Last three employers		Address		Kind of work	Renewals
Remarks:					

DEPARTMENT OF LABOR
U. S. EMPLOYMENT SERVICE
APPLICATION FOR WORK—Males

Each applicant is handed a card of introduction to his prospective employer, the bottom half of this card to be filled in by the employer and returned to the agency sending the worker. The card, in the form of a post card for mailing without postage, is as follows:

THIS CARD TO BE PRESENTED TO EMPLOYER

(No postage required.)

..... *Employment Office.*

..... *191*

To .....

.....

This will introduce .....*as an applicant for the position of* ..... *at* .....
(Wages.)

Transportation to be paid by { *Employer* / *Employee* } *Deducted from wages* ..... *Directed by* .....
Refunded .....

EMPLOYER, PLEASE FILL OUT SPACE BELOW AND RETURN CARD BY MAIL.

I have ..... *hired* ..... *for the position of* ..... *and he went to work*....., *191*

Name of employer .....

Address .....

THE UNITED STATES PUBLIC SERVICE RESERVE.

An important division of the United States Employment Service is the Public Service Reserve [1] organized in every State and county for the purpose of enrolling and classifying the man power of the Nation that is not engaged in military service and is adapted to war industrial work. It enrolls and registers men in every line of pro-

[1] An account of the work of the United States Public Service Reserve was given in the MONTHLY REVIEW for September, 1917, pp. 77 to 79.

fessional and industrial activity who might be called upon in some branch of war work. Between 16,000 and 18,000 technical men have been enrolled. Several thousand lawyers have been registered for war work. The reserve is indorsed by the American Federation of Labor and a large proportion of the national unions have expressed individual approval. It has supplied men of unusual qualifications to manufacturers with war contracts and has furnished men for nearly every Government department, bureau, and war committee. It has directed special workers to the Navy Department, the United States Shipping Board, the Ordnance Office, and other War Department divisions, for aircraft production, and other work. Public Service Reserve directors have been appointed in each State, the names and addresses of these directors appearing on pages 204 and 205.

SHIPYARD WORKERS SUPPLIED.

The United States Public Service Reserve has enrolled more than 265,000 shipyard volunteers, and from this supply will be drawn, through the Employment Service offices, workers to fill special requirements after the needs of the yards have exhausted the applicants for shipbuilding employment at the various branches of the Employment Service. Shipbuilders generally have been notified by the Employment Service that it is prepared to fill all their labor needs, and they have been requested to obtain their workers exclusively through the service. Many have agreed to do so. Compliance by the yards with this request and the cessation of their independent efforts to recruit labor will mean the elimination of the present general confusion in industry caused by the unintentional "stealing" of men by one yard from another, the unnecessary and premature withdrawal of workers from other industries, and the piling up of idle labor in the shipbuilding centers. It is imperative that employers make their calls specific, noting the particular positions for which men are needed, in order that requirements may be filled from among men who apply at Employment Service offices, the purpose being to delay as long as possible the necessity of drawing upon the Public Service Reserve's list of shipyard volunteers. The form of blank which shipyard employers are requested to file with the Employment Service is shown on page 202.

EMPLOYMENT SERVICE SUPPLIES FARM LABOR.

Hardly less important than the construction of ships is the production of food. The ranks of available experienced farm labor have been thinned by the call of the selective draft and farmers have wondered from what source they could draw to assist them in cultivating and harvesting the crops so much needed in the present crisis

This has afforded opportunity for the United States Employment Service to demonstrate again its effectiveness in mobilizing labor and distributing it where needed. The Public Service Reserve, in an intensive campaign, is enrolling men for war emergency farm service—men who are ready to give from one to two days a week to work on farms in their neighborhood, or a month or more wherever they might be needed. The purpose of this is to supplement the numbers who may be able to give all of their time during the farming season, and the enrollment will be drawn upon only as needed to meet the demand. In order to avoid duplication of effort the reserve directors are consulting with their respective State farm-help specialists, and local reserve agents are cooperating with the 2,300 county agricultural agents and seeking their expert advice. The State directors, through each local agent, are also investigating the agricultural housing problem to ascertain whether the farmers have adequate housing facilities and proper living conditions for the labor they are needing.

In addition to the farm workers thus enrolled the United States Boys' Working Reserve [1] has mobilized about 250,000 boys between the ages of 16 and 21 for work on farms this summer. Over 150,000 boys were thus utilized last year, and as a result of favorable experience many farmers have indicated that they will accept boy workers this year. In some States the boys were released early from school, and the New York State Food Commission appropriated $50,000 to further the boy-on-the-farm movement in that State. Pennsylvania has also appropriated $50,000 and Connecticut $25,000 for the same purpose. Approximately 15,000 farmers in one State (Indiana) have requested boys to help them this season. Maine, which last year employed 700 boys, this year will use many times that number.

As an initial step in the efforts of the Employment Service to be of greatest possible help to farmers, arrangements were made early in March with the Post Office Department to designate every third and fourth class postmaster and every rural carrier, approximately 98,000 in number at 55,000 offices, as farm-labor agents for the United States Employment Service. In this way every farming community has been given the advantage of employment service under Federal supervision, and through these agents the farmers have been made acquainted with the opportunities thus afforded of getting such help as they may need during the coming season. It is recognized that the success of this scheme depends largely upon the farmer himself, who must notify the local postmaster of his requirements in time, and be definite as to wages, character of work to be

[1] An account of the organization of the United States Boys' Working Reserve was given in the MONTHLY REVIEW for June, 1917, pp. 991-993. For list of State directors, corrected to Apr. 20, 1918, see p. 204.

performed, length of employment, and living conditions. The United States Employment Service and its cooperating State services are adequately equipped to give him assistance, but they can not supply labor until his needs are known.

Every farmer desiring to make application for farm help is requested to fill in the following blank which he may obtain from the local postmaster or the rural carrier by whom he is served:

FOR USE IN MAKING APPLICATION FOR FARM HELP

U. S. DEPARTMENT OF LABOR.
U. S. EMPLOYMENT SERVICE.
WASHINGTON.

READ CAREFULLY NOTATIONS ON BACK HEREOF BEFORE FILLING THIS BLANK.

Write name and address plainly.

Date. .....

1. Employer: ..... (Name.) Post office, ...
County of ..... State of .....
Telegraph office, ... Railroad station, ...
2. References: .....
3. Number of men you wish to hire: .....
4. (*a*) Nature of duties: ..... (State whether truck farm, stock farm, or dairy.)
(*b*) State number of cows each man must milk: .....
5. (*a*) Nationalities acceptable: ..... (State whether or not knowledge of English is necessary.)
(*b*) Will English-speaking men of any other nationality be acceptable? .....
(*c*) Do you desire experienced help or "green hands"? .....
6. (*a*) Married or single men preferred: .....
(*b*) Do you require that married men be accompanied by wives? .....
(*c*) Will children be objectionable? .....
7. (*a*) Will you advance transportation from points within the United States? .....
(*b*) If so, will amount be deducted later from employee's wages? .....
(*c*) Will you refund the money so deducted after a period of service, and, if so, under what conditions? .....
8. (*a*) What money wage will you pay married man ..... { green hand? $..... (Winter.) $..... (Summer.) per month; experienced hand? $..... (Winter.) $..... (Summer.) per month; }
and will house (furnished or unfurnished), garden patch, fuel, milk, etc., be provided free in addition to wages? .....
(*b*) Would services of wife be required, and if so, her duties and compensation therefor? .....
(*c*) What wages will you pay single man ..... { green hand? $..... (Winter.) $..... (Summer.) per month; experienced hand? $..... (Winter.) $..... (Summer.) per month; }
and will board, lodging, washing, etc., be furnished free in addition to wages? ..... (Yes or no.)
(*d*) Winter pay ..... (Date.) to ..... (Date.) Summer pay ..... (Date.) to ..... (Date.)

[Reverse side.]

9. When will services of this help be required?.....
(State day and month when you desire help to arrive.)
10. Hours of labor: .....
11. Will employment be permanent? .....
12. Size of farm or place, ... Under cultivation, ... No. of men on place, ...
(Acres.) (Acres.)
13. Do you employ extra hands for any part of the year; if so, how many; for what kind of work; at what pay; when, and for how long a period of time?
14. Remarks: .....

It is agreed that the undersigned will keep the Service informed as to need of men applied for above, and advise by telegraph (at employer's expense) in case said help is secured through other sources; this in order that men may not be directed and find position filled upon arrival.

[Sign here.] .....

(NOTE.—Additional sheets may be used if necessary.)

READ CAREFULLY BEFORE FILLING OUT BLANK.

☞N. B.—The party filling out this blank may return same to the postmaster or transmit same through the rural mail carrier or through the officer in charge of any branch post office, whereupon it will be forwarded to destination free of charge for postage. If transmitted otherwise the usual postage will be required.

In addition to answering carefully all the questions on this blank, your especial attention is called to the following:

QUESTION 4. NATURE OF DUTIES.—Define whether a "farmer" or a "farm laborer" is wanted. A "farmer" will be understood to mean one who is competent to take charge of and operate a farm without supervision. A "farm laborer" will be understood to mean one who has had some experience, but is to work under the immediate direction and supervision of the employer. If a "green hand" (one who has had no experience at farm work, but willing to learn) will be accepted as a farm laborer, it should be so stated. Also make it clear whether you operate a "dairy farm," "stock farm," "truck farm," etc. If immigrant help is acceptable, so state. "Experienced" are those with experience in native land, or in the United States; "green," those with no farming experience.

QUESTION 5. NATIONALITIES PREFERRED.—As much scope as possible should be allowed in the matter of nationalities which would be acceptable to you. Always state whether or not a knowledge of English is necessary.

QUESTION 6. MARRIED OR SINGLE MEN PREFERRED.—If your preference be for a man and wife, state whether or not a single man will answer, provided we are unable to supply the married couples. This is asked because at times there is a scarcity of the latter.

QUESTION 7. WILL YOU ADVANCE TRANSPORTATION FROM POINTS WITHIN UNITED STATES?—The necessity for this question is due to the fact that many good men apply at our branch offices who would willingly go to distant points, but are unable to do so without aid from the prospective employer. Such advance would, of course, be made through a representative of this division, who would see that the employee was properly ticketed and then mail his baggage check direct to the employer interested, which would serve somewhat as a precaution against an employee going astray.

It must be distinctly understood, however, that the responsibility of the service and its representative ends when the said employee has been placed upon the train or boat. No guaranty is given or implied that he will actually arrive at his destination. (See circular on this subject.)

QUESTION 8. WAGES.—This question must not be left unanswered, because of the fact that an employee wants to know as to the wages he is to receive before accepting an offer, and this point should be definitely stated. If wages are stated at so much per day, it should be made clear whether employee is paid for every day in the month or only for such days as work can be performed. Also approximate pay received per week or month in such case.

All communications relative hereto should be addressed:

U. S. EMPLOYMENT SERVICE,
DEPARTMENT OF LABOR,
WASHINGTON, D. C.

☞This service is public and no charge is made to employer or employee.

For the information of the local office, this and other information is recorded on the following card which is kept on file, the reverse side of the card being provided with space for noting help sent, showing the name of the applicant, his address, the date sent, and the result:

APPLICATION FOR FARM HELP

U. S. DEPT. OF LABOR
U. S. EMPLOYMENT SERVICE

Name of farmer		Date
P. O. address		Telephone exchange and number
Kind of farm (general, stock, dairy, fruit, or truck)	County	Age limit of help wanted

	Number wanted	Kind of work	Date wanted	Length of time wanted	Probable wages
Experienced Inexperienced men, with families					
Experienced Inexperienced single men					
Experienced Inexperienced older boys					
Experienced Inexperienced female workers					
Experienced Inexperienced day workers					

If you can use colored help, give number; if foreigners, give number and nationality preferred

Colored Foreigners

Number of "help wanted" required to milk Number of cows milked

State what is furnished (board, house, garden, etc.)
For single help

For married help

Full directions for reaching farm from nearest city, town, or village

Transportation expense

The postmaster or rural carrier is also prepared to assist the farm worker in obtaining employment by furnishing him with the following blank to be filled in and filed with the postmaster:

FARM WORKERS' APPLICATION FOR EMPLOYMENT

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

WASHINGTON

Date.....

Name..... Post Office.....

Age..... Height..... Weight..... Race.....

Where born (name of country) .....

If of FOREIGN BIRTH, how many years have you been in the United States? ..... Are you a citizen of the United States?.....

If married, name of wife and children.....

Will family accompany you?..... If so, is wife able and willing to accept employment as domestic?..... ("Yes" or "No.")

What languages do you speak?.....
Name and address of last employer.....
Cause of loss of position.....
How long employed by last employer.....
If now employed, state reason for desiring change.....
In what States will you accept employment?.....
Wages expected.....
Are you strong and robust .....
("Yes" or "No.")
State kind of farming you have done, where service was performed, and whether or not you can milk. .....
(Sign here).....

Supplementing the scheme just outlined, the Secretary of Labor on March 18, 1918, addressed a letter to the editors of 736 daily newspapers in cities of over 20,000 population, many of which have no public employment office, asking each to establish a cooperative farm-labor agency under the Federal Employment Service, to designate a member of his staff as labor agent, to agree to give publicity to local farm-labor demands, and to report weekly to the United States Employment Service. Compliance with this call for patriotic service by 84 newspapers [1] indicates an early completion of a chain of regular and war-emergency farm-labor employment offices covering the entire country. The regular branches of the United States Employment Service, cooperating State and municipal employment offices, subagencies connected with chambers of commerce and boards of trade, and newspapers are serving the cities and larger towns, while the third and fourth class postmasters and the rural carriers and county agents and farm-help specialists of the Department of Agriculture are covering the smaller towns, villages, and rural districts.

REPORTS REQUIRED BY THE EMPLOYMENT SERVICE.

The United States Public Service Reserve is making a month-to-month survey of actual labor conditions in the war industries in order that the full strength of American labor may be applied to war purposes. These monthly labor-status reports keep the Employment Service informed as to the extent to which each manufacturer of war material is doing war work, his present and anticipated labor needs, expected releases of labor, and housing conditions. Immediately upon receipt of a report showing shortage or future needs of labor, the Employment Service office nearest the plant reporting is sent a statement, indicating in detail the number of men and women workers required. The Employment Service utilizes all the available unemployed labor to fill the plant's requirements, and where necessary members of the Public Service Reserve are transferred to the more essential industries. By this means shortages of labor in war plants are kept at a minimum. These reports act as a labor barom-

[1] Up to April 23 this number of papers had replied favorably to the Secretary's letter. The Daily News of Geneva, N. Y., was the first newspaper to reply and has accordingly been given serial No. 1.

eter, enabling the Department of Labor not only to prevent a serious shortage of labor in an essential industry, but also to meet promptly the new demands for labor which follow the rapid expansion of production. The following blank is used in this connection:

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

Please send two copies of this request every Thursday to U. S. Employment Service, Washington, D. C., and a third copy to U. S. Employment Service at

.....

....., 1918.

..... Firm.
..... Office address.
..... Yard address.
(Give street, number, city, and State.)

Any strike in progress or pending? .....
What are conditions as to housing in vicinity of your plant?
Rent, houses of ——— rooms, per month, $——— to $———.
Board and room from $——— to $——— per week.
Board only..... ——— to ——— per week.
Double rooms..... ——— to ——— per week.
Single rooms..... ——— to ——— per week.
WORKING HOURS: ..... hours per day, ... per week. Plant now running ..... hours per day, ... hours per week, ... hours on Saturday.
OVERTIME: Time beyond ..... hours paid for at rate of .....
PIECEWORK: If any workmen paid on piecework rates, state result compared with hour rates in their pay envelopes .....
NIGHT RATES: ..... hours worked; pay figured as ..... hours, computing night rates in.
Number of employees on pay roll on day of report ..... Number quit or laid off during week ..... Number hired during week .....
Will you release any considerable number of employees soon? ..... How many? ..... When? .....

Occupation. (Specify kind of work.)	Men needed.			Rates of pay.			
	Now.	Later.		Day.		Night.	
		When.	No.	Hour.	Week.	Hour.	Week.

The Employment Service is also requiring each branch office to report daily on local employment conditions in specified trades. Weekly reports are also filed by each branch office, these reports noting the number and character of applications for workers and for jobs, the number directed to employment, and the number actually placed. The blank used is as follows:

WEEKLY REPORT

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

Week ending....., 19.... Office at.....

Make out 4 copies at close of business each Saturday; send 1 copy to field director, Washington; 1 to district officer; 1 to State director; 1, file.

Occupation.		Orders.		Applications.	Sent.	Reported placed.
General.	Specific.	Number.	Workers wanted.			
	Total.....					

REPORT ALL LABOR EXCEPT FARM LABOR ON THIS BLANK.

Other reports required to be filed daily are sent on the following blanks:

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

REPORT OF APPLICANTS NOT PLACED AND WILLING TO LEAVE THE CITY.

City.....

Date..... Superintendent.....

Name of applicant.	Principal occupation.	Other experience.	Single, married, or widowed.	Age.	Sex.	Color.	Minimum wage demanded.	Do you recommend applicant?	Limit applicant can pay for transportation.

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

REPORT OF ORDERS FOR HELP UNFILLED AND IMPOSSIBLE TO FILL LOCALLY

City.....

Date..... Superintendent.....

Kind of work.	Number wanted.	Probable wages.	Hours.	Sex.	Color.	Age limit.	Duration of job.	Latest date for filling order.	Amount employer will provide for transportation.	Probable cost of board.

PLACEMENT OF WOMEN ON THE FARMS.

The women's division of the United States Employment Service, together with the Department of Agriculture and the women's committee of the Council of National Defense, is engaged in working out the question of supplying women for farm work during the war emergency. The Department of Agriculture is ascertaining through its 2,300 county agents in what State and for what work farmers want women, and is securing through its extension service a list of women who might be available as leaders if training camps for women farm helpers were established. The Employment Service, through its women's division and with the aid of the farm-labor division, is registering women for farm work and will place them on farms. The women's committee of the Council of National Defense is taking up the question of training camps for women, the necessary educational and "recruiting" propaganda, and welfare work for women on farms.

The women's division of the Employment Service is receiving weekly reports from the branch offices by which it is informed of the demands for women in various lines of employment in all parts of the country. Reports from the county agents of the Department of Agriculture indicate that a number of States will experiment with woman labor this year on farms, but no general movement to put women on farms is contemplated for the present at least, as farmers will first use the men and boys available.

FEDERAL STATE DIRECTORS OF THE PUBLIC SERVICE RESERVE AND THE BOYS' WORKING RESERVE.

The following is a list of the directors of the United States Public Service Reserve and the United States Boys' Working Reserve, together with their addresses, corrected to April 20, 1918:

FEDERAL STATE DIRECTORS OF THE UNITED STATES PUBLIC SERVICE RESERVE AND OF THE UNITED STATES BOYS' WORKING RESERVE.

State.	Public Service Reserve.		Boys' Working Reserve.	
	Name.	Address.	Name.	Address.
Alabama	Ray Rushton	Montgomery	W. Nash Read	Montgomery.
Alaska	R. E. Robertson	Juneau		
Arizona	Thomas J. Croaff	Phoenix	Lindley B. Orme	Phoenix.
Arkansas	W. G. Sprague	Little Rock	W. J. Jernigan	Little Rock.
California	Arthur P. Will	Sacramento	B. H. Crocheron	Berkeley.
Colorado	Wm. N. W. Blayney	Denver	Joseph S. Jaffa	Denver.
Connecticut	Leo A. Korper	Hartford	Chas. L. Kirschner	New Haven.
Delaware	Charles Warner	Wilmington	Joseph Armstrong	Wilmington.
District of Columbia.	(1)	(1)	Robt. C. Howard	Washington.
Florida	Robert Gamble	Jacksonville	W. F. McCanless	Jacksonville.
Georgia	James D. Weaver	Dawson	Joseph T. Derry	Atlanta.
Hawaii			W. R. Farrington	Honolulu.
Idaho	O. G. E. Markhus	Boise	Harvey Allred	Boise.
Illinois	Chas. A. Munroe	Chicago	B. D. Butler	Chicago.
Indiana	N. E. Squibb	Indianapolis	Isaac D. Straus	Indianapolis.
Iowa	H. J. Metcalf	Des Moines	R. K. Bliss	Ames.
Kansas	A. A. Knapp	Topeka	W. L. Porter	Topeka.
Kentucky	F. L. McVey	Lexington	Philo C. Dix	Louisville.
Louisiana	F. A. Crippen	New Orleans	F. A. Crippen	New Orleans.

[1] No director appointed; the work is supervised by the central office of the Reserve at Washington.

FEDERAL STATE DIRECTORS OF THE UNITED STATES PUBLIC SERVICE RESERVE AND OF THE UNITED STATES BOYS' WORKING RESERVE—Concluded.

State.	Public Service Reserve.		Boys' Working Reserve.	
	Name.	Address.	Name.	Address.
Maine	C. S. Hichborn	Augusta	J. C. Smith	Augusta.
Maryland	John K. Shaw	Baltimore	John Redwood	Baltimore.
Massachusetts	Wm. A. Gaston	Boston	Stephen R. Dow	Boston.
Michigan	James T. Lynn	Detroit	C. A. Parcells	Detroit.
Minnesota	D. R. Cotton	St. Paul	D. D. Lescohier	Minneapolis.
Mississippi	S. J. Owen	New Albany	W. C. Trotter	Winona.
Missouri	C. C. Carson	Jefferson City	U. W. Lamkin	Jefferson City.
Montana	Scott Leavitt	Great Falls	L. R. Foote	Helena.
Nebraska	G. E. Norman	Lincoln	L. W. Trester	Omaha.
Nevada	C. X. Knight	Reno	Brewster Adams	Reno.
New Hampshire.	C. E. Carr	Concord	G. H. Whitcher	Concord.
New Jersey	L. T. Bryant	Trenton	W. A. O'Leary	Trenton.
New Mexico	J. H. Wagner	Santa Fe	J. H. Wagner	Santa Fe.
New York	W. A. Orr	Albany	H. D. Sayer	New York.
North Carolina	T. L. Bland	Rocky Mount	J. M. Johnson	West Raleigh.
North Dakota	J. P. Hardy	Fargo	E. F. Chandler	University.
Ohio	F. C. Croxton	Columbus	C. H. Mayhugh	Columbus.
Oklahoma	H. C. Tyrrell	Tulsa	A. L. Farmer	Tulsa.
Oregon	F. T. Griffith	Portland	J. W. Brewer	Portland.
Pennsylvania	J. C. Frazee	Philadelphia	J. C. Frazee	Philadelphia.
Rhode Island	E. A. Burlingame	Providence	E. A. Burlingame	Providence.
South Carolina	H. L. Tilghman	Columbia	S. H. Edmunds	Sumter.
South Dakota	Charles McCaffree	Pierre	W. A. Ostrander	Brookings.
Tennessee	Samuel L. King	Nashville	Albert Williams, jr	Nashville.
Texas	H. W. Lewis	Smithville	H. L. Hoisington	Dallas.
Utah	P. J. Moran	Salt Lake City	J. W. Watson	Logan.
Vermont	R. W. Simonds	Montpelier	C. C. Barnes	Northfield.
Virginia	H. P. Carter	Alexandria	H. P. Carter	Alexandria.
Washington	Robert Moran	Seattle	Robert Moran	Seattle.
West Virginia	S. B. Montgomery	Charleston	H. G. Young	Charleston.
Wisconsin	A. H. Melville	Madison	J. B. Borden	Madison.
Wyoming	Edw. P. Taylor	Cheyenne	Edw. P. Taylor	Cheyenne.

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of March, 1918, and in cases where figures are available, for the corresponding month in 1917. Figures are given from 147 public employment offices in 36 States and the District of Columbia—Federal employment offices in 28 States and the District of Columbia, Federal-State employment offices in 8 States, a Federal-State-county-municipal employment office in 1 State, a Federal-municipal employment office in 1 State, State employment offices in 14 States, State-municipal employment offices in 2 States, and municipal employment offices in 6 States. Figures from 2 Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Alabama.												
Mobile (Federal)	(1)	33	(1)	397	[2] 4	[2] 87	(1)	(1)	(1)	70	(1)	53
Arkansas.												
Helena (Federal)	.....	6	.....	138	.....	[2] 1	.....	(1)	.....	(1)	.....	(1)
Little Rock (Federal)	.....	178	.....	3,579	.....	860	.....	(1)	.....	1,068	.....	1,032
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,068	.....	1,032
California.												
Fresno (State)	.....	581	.....	1,001	.....	611	.....	(1)	.....	962	.....	766
Los Angeles (State-municipal)	3,614	4,059	6,320	6,415	2,482	2,613	(1)	(1)	5,737	5,722	5,003	4,896
Oakland (State)	855	1,664	1,047	2,937	502	1,153	461	(1)	1,008	2,385	769	1,981
Sacramento (State)	309	340	527	1,218	407	771	158	(1)	457	1,099	385	900
San Francisco (State)	1,623	2,859	2,917	5,959	1,961	2,353	991	(1)	2,765	5,593	1,960	3,816
Total	.....	.....	.....	.....	.....	.....	.....	.....	9,967	15,761	8,117	12,359
Colorado.												
Colorado Springs (State)	544	560	544	560	[2] 592	[2] 576	(1)	(1)	(1)	522	508	522
Denver (Federal)	10	30	8	355	[2] 96	[2] 900	(1)	(1)	25	345	6	292
Denver No. 1 (State)	293	560	293	560	[2] 354	[2] 742	(1)	(1)	(1)	392	223	392
Denver No. 2 (State)	367	559	367	559	[2] 305	[2] 372	(1)	(1)	(1)	304	206	304
Pueblo (State)	351	600	351	600	[2] 402	[2] 583	(1)	(1)	(1)	547	343	547
Total	.....	.....	.....	.....	.....	.....	.....	.....	25	2,110	1,286	2,057
Connecticut.												
Bridgeport (Federal-State)	(1)	765	677	903	[2] 837	[2] 920	(1)	(1)	(1)	823	607	709
Hartford (State)	(1)	(1)	938	1,029	[2] 1,106	[2] 1,182	(1)	(1)	(1)	(1)	747	829
New Haven (State)	(1)	(1)	773	795	[2] 1,233	[2] 854	(1)	(1)	(1)	(1)	654	701
Norwich (State)	(1)	(1)	275	160	[2] 310	[2] 299	(1)	(1)	(1)	(1)	256	146
Waterbury (State)	(1)	(1)	165	318	[2] 222	[2] 356	(1)	(1)	(1)	(1)	108	289
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	823	2,372	2,674
Delaware.												
Wilmington (Federal)	39	16	63	1,500	144	[2] 1,002	(1)	(1)	171	975	145	900
District of Columbia.												
Washington (Federal)[3]	114	135	567	2,348	[2] 724	1,730	(1)	(1)	519	2,196	491	2,097
Florida.												
Jacksonville (Federal)	1	15	59	1,150	[2] 22	[2] 638	(1)	(1)	2	613	2	346
Pensacola (Federal)	.....	6	.....	347	.....	2	.....	(1)	.....	1	.....	1
Tampa (Federal)	.....	4	.....	(1)	.....	[2] 305	.....	(1)	.....	305	.....	260
Total	.....	.....	.....	.....	.....	.....	.....	.....	2	919	2	607
Georgia.												
Atlanta (Federal-State)	.....	93	.....	1,074	.....	[2] 800	.....	(1)	.....	627	.....	627
Idaho.												
Moscow (Federal)	3	31	4	357	[2] 2	[2] 32	(1)	(1)	1	32	1	32

[1] Not reported. [2] Number applying for work. [3] 1918 figures for men's division only.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work. New registrations.		Persons applying for work. Renewals.		Persons referred to positions.		Positions filled.	
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Illinois.												
Bloomington (Federal-State)	.....	103	.....	137	.....	[1] 112	.....	(2)	.....	93	.....	92
Chicago (Federal)	759	3,059	3,987	14,319	3,297	13,708	(2)	(2)	3,023	11,651	2,965	10,361
Chicago (State)	4,977	4,461	11,161	13,856	10,707	8,605	2,068	6,998	12,119	14,031	9,003	11,699
Danville (Federal-State)	.....	323	.....	392	.....	[1] 390	.....	(2)	.....	323	.....	305
Decatur (Federal-State)	.....	22	.....	107	.....	[1] 54	.....	(2)	.....	25	.....	19
East St. Louis (State)	447	789	951	1,277	299	465	632	590	870	1,051	820	1,021
Peoria (State)	898	940	1,106	1,386	193	164	720	1,037	874	1,197	866	1,196
Rockford (State)	717	781	1,226	1,199	659	873	237	249	838	973	788	910
Rock Island-Moline (State)	466	1,100	791	3,877	389	1,189	299	1,174	504	2,254	87	2,092
Springfield (State)	447	719	519	963	210	286	316	638	478	877	430	763
Total	.....	.....	.....	.....	.....	.....	.....	.....	18,707	32,475	14,899	28,458
Indiana.												
Evansville (State)	107	112	357	462	7	(2)	2	(2)	417	397	326	371
Indianapolis (Federal)	264	112	511	829	[1] 603	[1] 1,040	(2)	(2)	493	821	456	665
Indianapolis (State)	1,191	1,043	1,191	1,212	867	959	211	81	1,161	1,031	1,078	960
South Bend (State)	133	177	418	311	358	206	34	66	340	250	300	231
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,411	2,499	2,160	2,227
Iowa.												
Davenport (Federal)	.....	154	.....	578	.....	[1] 415	.....	(2)	.....	279	.....	159
Des Moines (Federal-State)	76	261	136	735	105	[1] 469	26	(2)	125	397	52	186
Sioux City (Federal)	.....	72	.....	202	.....	[1] 88	.....	(2)	.....	61	.....	56
Waterloo (Federal)	.....	100	.....	175	.....	[1] 212	.....	(2)	.....	76	.....	60
Total	.....	.....	.....	.....	.....	.....	.....	.....	125	813	52	461
Kansas.												
Topeka (Federal-State)	94	48	130	61	119	73	4	2	121	56	100	45
Kentucky.												
Louisville (State)	234	122	234	103	[1] 345	[1] 130	(2)	(2)	234	103	234	103
Maine.												
Portland (Federal)	.....	2	.....	280	.....	37	.....	(2)	.....	5	.....	(2)
Maryland.												
Baltimore (Federal)	111	447	159	6,259	[1] 300	[1] 6,561	(2)	(2)	203	5,571	203	3,636
Massachusetts.												
Boston (Federal)	6	414	16	3,372	[1] 52	[1] 11,389	(2)	(2)	6	3,272	6	2,568
Boston (State)	1,949	1,898	2,189	2,341	[1] 1,126	[1] 1,466	(2)	(2)	[3] 3,116	[3] 3,445	1,351	1,493
Springfield (State)	926	793	1,251	1,195	[1] 347	[1] 370	(2)	(2)	[3] 1,255	[3] 1,237	847	813
Worcester (State)	983	937	1,208	1,357	[1] 495	[1] 583	(2)	(2)	[3] 1,268	[3] 1,378	700	736
Total	.....	.....	.....	.....	.....	.....	.....	.....	5,645	9,302	2,904	5,610
Michigan.												
Battle Creek (State)	47	100	189	475	[1] 85	490	(2)	75	74	475	74	475
Bay City (State)	40	22	93	235	[1] 122	200	(2)	35	69	91	69	91
Detroit (Federal)	85	93	361	1,005	[1] 318	[1] 1,136	(2)	(2)	318	891	318	895
Detroit (State)	836	1,422	4,196	4,754	(2)	4,622	(2)	132	3,956	4,734	3,956	4,734
Flint (State)	650	292	650	504	[1] 650	431	(2)	114	650	504	650	504
Grand Rapids (State)	425	539	727	1,545	[1] 722	1,293	(2)	295	684	1,522	684	1,475

[1] Number applying for work. [2] Not reported. [3] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Michigan—Continued.												
Jackson (State)	362	370	767	737	[1] 765	458	(2)	198	754	635	749	583
Kalamazoo (State)	428	210	543	468	[1] 428	587	(2)	60	428	431	428	252
Lansing (State)	52	108	190	701	[1] 68	627	(2)	108	59	627	59	627
Muskegon (State)	54	26	155	401	[1] 138	171	(2)	48	132	188	127	166
Saginaw (State)	121	79	579	362	[1] 497	462	(2)	103	466	362	466	362
Total	.....	.....	.....	.....	.....	.....	.....	.....	7,590	10,460	7,580	10,055
Minnesota.												
Duluth (State)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1,168	867
Minneapolis (Federal)	67	54	79	195	[1] 204	[1] 297	(2)	(2)	26	88	26	82
Minneapolis (State)	(2)	1,667	(2)	2,024	(2)	(2)	(2)	1,794	(2)	1,762	1,501	1,503
St. Paul (State)	(2)	(2)	(2)	1,137	(2)	(2)	(2)	(2)	(2)	729	878	710
Total	.....	.....	.....	.....	.....	.....	.....	.....	26	2,579	3,573	3,162
Mississippi.												
Gulfport (Federal)	3	16	3	238	[1] 57	[1] 151	(2)	(2)	(2)	80	(2)	53
Missouri.												
Kansas City (Federal-State)	984	1,560	1,737	3,614	939	[1] 4,000	(2)	(2)	1,598	3,205	1,403	2,719
St. Charles (Federal)	.....	9	.....	9	.....	[1] 16	.....	(2)	.....	16	.....	14
St. Joseph (State)	(2)	1,033	1,072	1,865	[1] 954	1,120	(2)	(2)	954	1,120	949	1,118
St. Louis (Federal-State)	585	467	1,086	3,465	503	[1] 1,753	(2)	(2)	581	1,619	537	1,499
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,133	5,960	2,889	5,350
Montana.												
Butte (municipal)	(2)	(2)	360	712	[1] 550	[1] 870	(2)	(2)	(2)	(2)	305	567
Helena (Federal)	.....	1	.....	50	.....	[1] 1	.....	(2)	.....	1	.....	(2)
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	1	305	567
Nebraska.												
Lincoln (Federal-State)	.....	228	.....	308	.....	297	.....	(2)	.....	297	.....	288
Omaha (Federal-State-county-municipal)	597	1,073	1,122	2,268	[1] 1,209	[1] 1,468	(2)	(2)	1,113	1,331	989	1,216
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,113	1,628	989	1,504
New Jersey.												
Jersey City (Federal-State)	(2)	73	(2)	922	(2)	[1] 844	(2)	(2)	(2)	364	(2)	309
Newark (Federal-State)	(2)	3,796	(2)	9,243	(2)	[1] 12,122	(2)	(2)	(2)	8,100	(2)	6,848
Orange (Federal-State)	(2)	317	(2)	775	(2)	274	(2)	(2)	(2)	543	(2)	318
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	9,007	(2)	7,475
New York.												
Albany (State)	596	689	743	996	480	531	340	319	786	958	405	541
Buffalo (Federal)	1,220	101	790	997	1,292	[1] 1,128	(2)	(2)	1,907	809	1,357	568
Buffalo (State)	1,276	1,453	1,801	2,749	1,332	1,478	142	265	1,874	2,469	1,391	1,607
New York City (State)	1,528	2,933	2,061	4,522	1,256	1,978	688	1,126	2,271	4,050	1,401	3,424
New York City (municipal)	2,876	2,488	3,166	2,703	2,351	1,897	2,388	1,938	3,963	3,224	2,665	2,086
Rochester (State)	1,739	2,045	2,381	3,007	917	1,409	633	694	1,942	2,318	1,037	1,213
Syracuse (State)	1,369	1,307	1,899	1,867	891	823	320	341	1,636	1,489	1,091	1,003
Total	.....	.....	.....	.....	.....	.....	.....	.....	14,379	15,317	9,347	10,442

[1] Number applying for work. [2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Ohio.												
Akron (State-municipal)	(1)	(1)	2,409	2,754	906	967	1,861	2,332	1,927	2,227	1,657	1,840
Athens (State-municipal)	.....	(1)	.....	74	.....	26	.....	57	.....	51	.....	37
Canton (State-municipal)	.....	(1)	.....	626	.....	461	.....	243	.....	564	.....	375
Chillicothe (State-municipal)	.....	(1)	.....	585	.....	402	.....	306	.....	523	.....	445
Cincinnati (State-municipal)	(1)	(1)	2,004	2,530	1,749	1,494	3,151	2,890	1,990	2,462	1,366	1,994
Cleveland (Federal)	48	153	72	1,596	[2] 88	[2] 680	(1)	(1)	64	380	19	177
Cleveland (State-municipal)	(1)	(1)	7,815	8,546	3,135	2,682	9,222	8,722	6,872	7,652	5,520	6,362
Columbus (State-municipal)	(1)	(1)	2,492	3,914	640	1,020	2,412	3,594	2,209	3,580	1,950	2,836
Dayton (State-municipal)	(1)	(1)	1,314	2,834	634	1,620	1,244	1,801	1,082	2,458	960	2,202
Hamilton (State-municipal)	.....	(1)	.....	313	.....	174	.....	52	.....	222	.....	190
Lima (State-municipal)	.....	(1)	.....	539	.....	319	.....	261	.....	380	.....	330
Mansfield (State-municipal)	.....	(1)	.....	1,963	.....	861	.....	628	.....	1,381	.....	1,304
Marietta (State-municipal)	.....	(1)	.....	354	.....	151	.....	157	.....	262	.....	216
Marion (State-municipal)	.....	(1)	.....	588	.....	376	.....	251	.....	482	.....	487
Portsmouth (State-municipal)	.....	(1)	.....	903	.....	650	.....	172	.....	694	.....	522
Sandusky (State-municipal)	.....	(1)	.....	372	.....	189	.....	86	.....	214	.....	148
Springfield (State-municipal)	.....	(1)	.....	634	.....	408	.....	424	.....	497	.....	300
Steubenville (State-municipal)	.....	(1)	.....	754	.....	419	.....	415	.....	648	.....	407
Tiffin (State-municipal)	.....	(1)	.....	401	.....	337	.....	138	.....	331	.....	279
Toledo (State-municipal)	(1)	(1)	2,857	3,779	1,098	1,616	3,087	3,754	2,544	3,605	2,122	2,987
Washington Courthouse (State-municipal)	.....	(1)	.....	226	.....	113	.....	60	.....	138	.....	104
Youngstown (State-municipal)	(1)	(1)	1,309	2,113	791	962	925	1,625	1,273	1,840	1,094	1,643
Zanesville (State-municipal)	.....	(1)	.....	264	.....	256	.....	178	.....	294	.....	211
Total	.....	.....	.....	.....	.....	.....	.....	.....	17,961	30,885	14,688	25,396
Oklahoma.												
Enid (State)	(1)	146	125	200	[2] 157	[2] 164	(1)	(1)	109	157	111	140
Muskogee (State)	(1)	370	444	430	[2] 308	[2] 428	(1)	(1)	299	426	286	317
Oklahoma (State)	(1)	336	518	751	[2] 480	[2] 587	(1)	(1)	476	570	434	486
Tulsa (State)	(1)	663	1,113	909	1,057	[2] 824	(1)	(1)	1,060	677	1,060	611
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,944	1,830	1,891	1,554
Oregon.												
Portland (Federal)	1,126	1,972	1,379	7,146	[2] 1,631	5,870	.....	.....	1,449	5,649	1,377	5,449
Portland (municipal)	851	2,323	1,308	7,766	270	114	.....	.....	.....	.....	1,178	5,457
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,449	5,649	2,555	10,906

[1] Not reported. [2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Pennsylvania.												
Altoona (State)	(1)	374	129	2,162	93	1,395	33	39	91	925	82	863
Erie (State)	.....	74	.....	973	.....	418	.....	78	.....	409	.....	327
Harrisburg (State)	(1)	485	634	2,302	231	686	135	190	360	847	323	820
Johnstown (State)	(1)	47	155	236	93	99	14	7	92	122	75	114
New Castle (State)	.....	42	.....	74	.....	[2] 65	.....	(1)	.....	59	.....	59
New Kensington (State)	.....	59	.....	231	.....	[2] 223	.....	(1)	.....	211	.....	211
Philadelphia (Federal)	198	298	466	5,773	[2] 608	[2] 22,236	(1)	(1)	597	20,777	526	20,681
Philadelphia (State)	(1)	1,283	1,228	8,693	825	11,168	696	380	1,209	8,301	1,002	8,015
Pittsburgh (Federal)	33	220	746	4,982	[2] 777	[2] 849	(1)	(1)	439	794	354	752
Pittsburgh (State)	(1)	454	1,428	8,209	679	2,426	188	293	732	2,337	670	2,205
Scranton (State)	.....	29	.....	126	.....	255	.....	1	.....	105	.....	105
Williamsport (State)	.....	73	.....	3,316	.....	181	.....	2	.....	77	.....	59
York (State)	.....	93	.....	431	.....	235	.....	5	.....	300	.....	217
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,520	35,264	3,032	34,463
Rhode Island.												
Providence (Federal)	.....	46	.....	1,580	.....	[2] 1,177	.....	(1)	.....	842	.....	486
Providence (State)	164	158	177	180	119	217	143	26	(1)	180	177	180
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	1,022	177	666
South Carolina.												
Charleston (Federal)	2	11	7	438	[2] 37	[2] 246	(1)	(1)	18	160	18	160
Tennessee.												
Memphis (Federal)	24	88	414	26,114	[2] 239	[2] 2,321	(1)	(1)	205	2,168	20	2,150
Texas.												
Dallas (municipal)	252	170	477	257	[3] 307	[4] 383	22	10	500	298	437	292
Galveston (Federal)	4	26	7	353	[2] 31	[2] 283	(1)	(1)	13	247	13	14
Total	.....	.....	.....	.....	.....	.....	.....	.....	513	545	450	306
Virginia.												
Alexandria (Federal)	.....	26	.....	106	.....	[2] 15	.....	(1)	.....	8	.....	8
Norfolk (Federal)	15	152	20	14,973	[2] 91	[2] 916	(1)	(1)	70	561	15	301
Richmond (municipal)	238	157	369	192	[2] 446	[2] 285	(1)	(1)	446	261	181	123
Total	.....	.....	.....	.....	.....	.....	.....	(1)	516	830	196	432
Washington.												
Aberdeen (Federal)	9	5	38	18	[2] 152	[2] 33	(1)	(1)	38	18	38	18
Bellingham (Federal-municipal)	224	133	418	243	306	[2] 318	(1)	(1)	332	224	299	203
Everett (municipal)	(1)	272	(1)	(1)	(1)	(1)	(1)	(1)	(1)	41	261	235
North Yakima (Federal)	451	494	689	909	[2] 875	[2] 904	(1)	(1)	660	803	594	777
Seattle (Federal)	185	408	322	10,859	[2] 1,427	[2] 6,500	(1)	(1)	208	6,030	198	5,208
Spokane (Federal)	124	226	186	369	[2] 309	[2] 921	(1)	(1)	169	345	168	318
Spokane (municipal)	1,760	1,241	2,150	1,972	25	(1)	5	(1)	2,004	1,925	1,921	1,891
Tacoma (Federal-municipal)	603	681	1,352	1,737	[2] 1,443	[2] 4,050	(1)	(1)	1,271	1,533	1,257	1,458
Walla Walla (Federal)	175	370	250	455	[2] 417	[2] 310	(1)	(1)	225	217	138	205
Wenatchee (Federal)	.....	65	.....	108	.....	[2] 52	.....	(1)	.....	50	.....	49
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,907	11,186	4,874	10,362
Wyoming.												
Cheyenne (Federal)	.....	15	.....	780	.....	136	.....	(1)	.....	158	.....	57
Grand total	.....	.....	.....	.....	.....	.....	.....	.....	95,396	210,134	85,550	188,038

[1] Not reported. [2] Number applying for work. [3] Includes 172 transients. [4] Includes 341 transients.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Concluded.

CANADA.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Quebec.												
Montreal (provincial)	368	133	614	434	358	347	(1)	(1)	463	407	390	315
Quebec (provincial)	(1)	17	31	61	[2] 111	[2] 64	(1)	(1)	(1)	39	24	30
Total	.....	.....	.....	.....	.....	.....	.....	.....	463	446	414	375

[1] Not reported. [2] Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN MARCH, 1918.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in March, 1918, from representative manufacturing establishments in 13 industries. Comparing the figures for March, 1918, with those from identical establishments for March, 1917, it appears that in five industries there was an increase in the number of people employed and in eight a decrease. Cigar manufacturing shows an increase of 5.3 per cent, while silk, leather manufacturing, and automobile manufacturing show decreases of 9.9 per cent, 8.8 per cent, and 8.6 per cent, respectively.

Eleven industries show an increase in the total amount of the pay roll for March, 1918, as compared with March, 1917. The greatest increase indicated—28 per cent—was in woolen. Six of the 13 industries show an increase of over 20 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1917, AND MARCH, 1918.

Industry.	Establishments reporting for March both years.	Period of pay roll.	Number on pay roll in March—		Per cent of increase (+) or decrease (−).	Amount of pay roll in March—		Per cent of increase (+) or decrease (−).
			1917	1918		1917	1918	
Boots and shoes	70	1 week	63,517	60,296	−5.1	915,519	1,004,423	+ 9.7
Cotton manufacturing	55	...do	56,206	54,796	−2.5	610,500	744,750	+21.8
Cotton finishing	18	...do	15,244	15,084	−1.1	208,832	244,357	+17.0
Hosiery and underwear	60	...do	31,473	30,935	−1.7	326,562	398,659	+22.1
Woolen	50	...do	49,891	50,653	+1.5	666,476	852,858	+28.0
Silk	41	2 weeks	16,443	14,812	−9.9	386,985	385,584	− .4
Men's ready-made clothing	35	1 week	24,226	24,564	+1.4	371,241	442,757	+19.3
Iron and steel	108	½ month	207,130	209,404	+1.1	9,021,952	11,154,095	+23.6
Car building and repairing	31	...do	30,226	30,150	− .3	1,062,792	1,279,783	+20.4
Cigar manufacturing	58	1 week	18,905	19,909	+5.3	232,477	269,190	+15.8
Automobile manufacturing	50	...do	137,093	125,277	−8.6	3,073,893	2,981,051	− 3.0
Leather manufacturing	36	...do	17,861	16,295	−8.8	266,744	288,957	+ 8.3
Paper making	50	...do	27,493	27,542	+ .2	401,099	510,391	+27.2

The table below shows the number of persons actually working on the last full day of the reported pay period in March, 1917, and March, 1918, in identical establishments. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MARCH, 1917, AND MARCH, 1918.

Industry.	Establishments reporting for March, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in March.		Per cent of increase (+) or decrease (—).
			1917	1918	
Boots and shoes	22	1 week	12,922	11,931	— 7.7
Cotton manufacturing	36	...do	28,263	27,437	— 2.9
Cotton finishing	13	...do	10,497	10,456	— .4
Hosiery and underwear	19	...do	13,042	12,727	— 2.4
Woolen	40	...do	37,913	39,396	+ 3.9
Silk	24	2 weeks	10,996	9,823	—10.7
Men's ready-made clothing	4	1 week	3,276	3,995	+21.9
Iron and steel	83	½ month	159,575	161,954	+ 1.5
Car building and repairing	29	...do	26,832	26,351	— 1.8
Cigar manufacturing	16	1 week	4,941	4,850	— 1.9
Automobile manufacturing	29	...do	83,678	74,889	—10.5
Leather manufacturing	19	...do	11,269	11,084	— 1.7
Paper making	15	...do	9,289	9,637	+ 3.7

The next table shows that in 10 of the 13 industries there were more persons on the pay roll in March, 1918, than in February, 1918. Cotton, woolen, and automobile manufacturing show the largest increases—4.6 per cent, 4.3 per cent, and 4 per cent, respectively. Decreases are shown in 3 industries. Men's ready-made clothing shows the largest decrease—3.7 per cent.

Each of the 13 industries reporting show marked increases in the total amount of the pay roll when comparing March with February, 1918. This is not due so much to increases in wage rates as to the increased activity in many plants, which have not run their full capacity during the past few months, owing to a shortage of coal, railroad congestion, unfavorable weather conditions, and, in a few instances, labor disturbances. Woolen, hosiery and underwear, and cotton manufacturing show the largest increases—23.6 per cent, 17.8 per cent, and 15.7 per cent, respectively, while the increases in the other industries range from 2.4 per cent to 14.8 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1918, AND MARCH, 1918.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
			February, 1918.	March, 1918.		February, 1918.	March, 1918.	
Boots and shoes	71	1 week	60,767	60,986	+0.4	$933,308	$1,016,947	+ 9.0
Cotton manufacturing	55	...do	51,981	54,394	+4.6	639,660	740,215	+15.7
Cotton finishing	18	...do	14,721	15,084	+2.5	222,404	244,357	+ 9.9
Hosiery and underwear	57	...do	29,105	29,495	+1.3	324,424	382,099	+17.8
Woolen	50	...do	48,578	50,653	+4.3	689,834	852,858	+23.6
Silk	39	2 weeks	13,572	13,685	+ .8	304,072	348,561	+14.6
Men's ready-made clothing	35	1 week	25,534	24,581	−3.7	432,465	442,757	+ 2.4
Iron and steel	107	½ month	204,972	208,544	+1.7	10,123,423	11,007,962	+ 8.7
Car building and repairing	30	...do	29,966	29,778	− .6	1,160,831	1,263,235	+ 8.8
Cigar manufacturing	56	1 week	18,996	19,557	+3.0	245,837	265,174	+ 7.9
Automobile manufacturing	49	...do	118,255	122,998	+4.0	2,642,126	2,933,676	+11.0
Leather manufacturing	36	...do	16,199	15,790	−2.5	262,720	281,826	+ 7.3
Paper making	49	...do	25,715	26,625	+3.5	430,921	494,910	+14.8

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for February and March, 1918. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN FEBRUARY, 1918, AND MARCH, 1918.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			February, 1918.	March, 1918.	
Boots and shoes	23	1 week	12,791	12,675	−0.9
Cotton manufacturing	34	...do	24,326	26,705	+9.8
Cotton finishing	13	...do	10,366	10,456	+ .9
Hosiery and underwear	19	...do	11,672	11,720	+ .4
Woolen	39	...do	35,617	36,843	+3.4
Silk	24	2 weeks	9,099	9,187	+1.0
Men's ready-made clothing	5	1 week	4,173	4,012	−3.9
Iron and steel	84	½ month	161,584	166,236	+2.9
Car building and repairing	29	...do	27,169	26,351	−3.0
Cigar manufacturing	19	1 week	4,792	4,862	+1.5
Automobile manufacturing	29	...do	71,523	73,231	+2.4
Leather manufacturing	18	...do	10,920	10,557	−3.3
Paper making	15	...do	9,879	9,637	−2.5

CHANGE IN WAGE RATES.

In all of the 13 industries there were establishments reporting increases in the wage rates and in one—iron and steel—a decrease between the February and March, 1918, reports. A number of establishments gave no definite answer to the inquiry relative to wage-rate changes, but in such cases it is probably safe to assume that few if any changes were made.

Boots and shoes: Two establishments reported an increase of 10 per cent—one to 66⅔ per cent of the employees, and the second to cutters with no information as to the number affected. One plant reported an increase but gave no further data. Two plants made a few special increases, while two other plants granted minor increases.

Cotton manufacturing: One establishment reported an increase of about 20 per cent to the entire force. Four plants granted an increase of 10 per cent to all the employees; one, a general average increase of 10 per cent; and another reported a bonus of 10 per cent. One plant gave an increase of 8 per cent but did not state the number affected. A general increase of 6 per cent throughout the mill was granted in one plant. Two-thirds of the force in one establishment received an increase of 5 per cent. One establishment reported an increase to the entire force but did not state the amount of increase.

Cotton finishing: One plant reported an increase of 15 per cent but gave no data concerning the number of the force affected.

Hosiery and underwear: One firm granted a bonus of 16 per cent. Three establishments gave a 5 per cent increase, this affecting the entire force except the foremen and office force in one, while two did not state the proportion of the force affected.

Woolen: One plant reported an increase of 10 per cent affecting all the employees.

Silk: A 12 per cent increase to weavers, or slightly more than 33 per cent of the force, was granted in one plant. Two establishments reported an increase of 10 per cent, affecting 90 per cent of the force in one plant, while the other gave no statement as to the number affected. Another plant gave a bonus of 10 per cent to full-time workers. One establishment reported increases ranging from 5¾ per cent to 14¼ per cent to approximately 69 per cent of the force. Half the force in one plant was granted an increase of about 10 per cent, and the other half received an increase of approximately 5 per cent. The entire force in one plant was increased from 7 to 10 per cent. Two plants granted an increase of 7½ per cent, affecting the entire force in one, but the other did not state whether or not it was general. One establishment reported an increase of 2 cents per hour to practically the entire force.

Men's ready-made clothing: Two establishments reported an increase—one, 20 per cent to about 29 per cent of the employees; while the other failed to state the amount of increase and the proportion of employees affected.

Iron and steel: Increases in wage rates were reported by 6 plants and a decrease by one plant. Two establishments granted increases of 7½ per cent to men belonging to the Amalgamated Association of Iron, Steel and Tin Workers, which equaled about 40 per cent of the employees in one plant and 25 per cent in the other. One plant

reported increases of from 5 to 15 per cent but made no further statement. Half the force in one plant received an increase of 5 per cent, while 45 per cent of another establishment received a 2½ per cent increase. A decrease of 2 per cent, affecting 40 per cent of the force, was reported by one plant.

Car building and repairing: One plant gave a 15 per cent increase, but did not state the number affected, and a second establishment stated that 75 per cent of the force received an increase of 6 per cent.

Cigar manufacturing: Only one increase—8 per cent to 60 per cent of the force—was reported.

Automobile manufacturing: An increase of 10 per cent was granted to 8 per cent of the force in one plant. One establishment reported an increase of from 2 to 4 cents per hour to about 30 per cent of the employees; one, an increase in the productive average hourly rate of 0.0109 cents; and another reported an increase but gave no data as to the amount or number affected.

Leather manufacturing: One plant granted an increase of 10 per cent to about 10 per cent of the employees. Another reported an increase of 9 per cent affecting 12 per cent of the force. Fifty per cent of the force in one establishment was advanced $1 per week. One plant reported an increase of 7⅔ per cent to about two-thirds of its employees.

Paper manufacturing: An increase of 20 per cent was reported by one plant but no statement was made as to the number affected. Three plants reported an increase of 10 per cent—one, to 90 per cent of the force; another, to approximately 23 per cent of the employees; and the third, to about 90 per cent of the employees, with smaller increases to the remaining 10 per cent of the employees. One establishment granted an increase of approximately 3 per cent to the entire pay roll and another reported an increase of 2½ cents an hour to all of the employees.

EMPLOYMENT IN MASSACHUSETTS, OCTOBER TO DECEMBER, 1917.

Massachusetts industries experienced some decrease in the demand for labor at the close of December, 1917, as compared with the demand at the close of September, 1917, according to the Fortieth Quarterly Report on Employment recently issued by the State Bureau of Statistics.[1] This decrease, it is explained, was due principally to less activity in the building trades because of weather conditions and to a closing down of some establishments because of a lack of fuel or raw materials used in manufacture. However, the report notes an increased activity in the industries directly affected

[1] Massachusetts. Bureau of Statistics. Labor Division. Fortieth quarterly report on employment in Massachusetts, quarter ending Dec. 31, 1917. Boston, 1918. 16 pp.

by Government demands, such as shipbuilding, manufacture of military equipment and munitions, and transportation. A certain amount of unemployment is ascribed to a shifting about of a large element of the industrial population, as shown by the "abnormally high rate" of labor turnover in some industries, particularly shipbuilding and railroad work. In the latter instance, it is stated, over 1,000,000 new men were hired to fill about one-third as many positions, which is "about double the normal turnover."

Records on file with the Bureau of Statistics show that during the quarter ending December 31, 1917, there were 98 industrial controversies (97 strikes and 1 lockout). Some of the more important, as measured by duration and number of men affected, occurred in industries having Government contracts. The report mentions several of these strikes, but the figures presented are insufficient to render them readily tabulatable.

Based on reports received from 1,093 labor organizations with a membership of 201,404 it appears that for the quarter ending December 31, 1917, 14,900 members, or 7.4 per cent, were unemployed, of which number 7,131, or 3.5 per cent of all members, were unemployed on account of lack of work or of materials. In the corresponding quarter of 1916, 6 per cent of 171,877 members were unemployed, 2.7 per cent being unemployed because of lack of work or of materials. This indicates a decreased demand for workers as compared with the last quarter of 1916; it also indicates, as stated at the outset, a decreased demand as compared with the preceding quarter of 1917. The following table shows the extent of unemployment of organized wage earners, by trades, for the quarter ending December 31, 1917, as compared with the corresponding quarter of 1916 and the three preceding quarters of 1917:

EXTENT OF UNEMPLOYMENT IN PRINCIPAL INDUSTRIES AND TRADES IN EACH QUARTER OF 1917 AND THE LAST QUARTER OF 1916.

Industry and trade.	Quarter ending Dec. 31, 1917.				Per cent reported as unemployed, quarter ending—			
	Number reporting.		Unemployed.					
	Unions.	Membership.	Members.	Per cent.	Dec. 30, 1916.	Mar. 31, 1917.	June 30, 1917.	Sept. 29, 1917.
Building trades	319	37,511	6,933	18.5	11.0	16.0	5.8	6.2
Boot and shoe industry	95	39,679	1,761	4.4	2.9	6.6	24.3	12.5
Textile industry	52	17,462	550	3.1	3.5	4.5	4.2	3.8
Transportation (steam and electric)	121	30,770	1,044	3.4	2.7	3.8	2.2	2.2
Iron and steel manufacturing	82	14,612	524	3.6	3.4	3.5	3.4	2.3
Printing and allied trades	46	5,694	171	3.0	4.2	4.8	4.2	3.1
All other industries and trades	378	55,676	3,917	7.0	8.4	6.7	3.9	3.9
Total	1,093	201,404	14,900	7.4	6.0	7.3	8.4	5.6

The activities of the three public employment offices of the State (located at Boston, Springfield, and Worcester) for the last quarters, respectively, of 1916 and 1917, are presented in the following table:

SUMMARY OF BUSINESS DONE BY MASSACHUSETTS PUBLIC EMPLOYMENT OFFICES DURING FOURTH QUARTER OF 1916 AND OF 1917.

Quarter ending Dec. 31—	Persons applied for.		Offers of positions.		Positions reported filled.				
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Ratio to positions offered.	Ratio to persons applied for.
1916.....	8,237	5,857	11,221	6,901	4,631	4,477	9,108	50.3	64.6
1917.....	7,418	5,137	10,834	6,215	4,783	4,095	8,878	52.1	70.7

EMPLOYMENT IN NEW YORK IN MARCH, 1918.

The Bureau of Employment of the New York State Industrial Commission, on April 1, 1918, issued the following statement of the placement work done in the five zones of New York State:

All the activities of the different offices of the State bureau of employment increased very largely during the month of March over the month previous. It will be noted in the table appended to this that there has been a large increase in the number of registrations and renewals. This is particularly true of the registrations of male workers. The increase in female workers is 300, and in male workers 1,600, indicating the large proportion of male workers seeking positions.

The increase in farm-hand placements is especially noticeable. Nearly five times as many were placed in March as in February. The State bureau of employment is now in a position to be of great help to the farmers of the State. The New York State Food Commission has collected 32 farm-labor specialists and placed them directly under the supervision of the State bureau of employment. It is the duty of these farm-labor specialists to search out in each of the industrial communities of the State such men as have heretofore done farm work and are now available as farm help. These farm-labor specialists have been placed in the cities of New York, Buffalo, Rochester, Syracuse, Albany, Binghamton, Elmira, Utica, Geneva, Jamestown, Corning, Batavia, Oswego, Auburn, Olean, Middletown, Watertown, Plattsburg, Troy, Schenectady, Kingston, Poughkeepsie, and Oneonta. In addition to these farm-labor specialists, the United States Department of Agriculture is furnishing over 50 men who are to be selected by the County Farm Bureau Association as assistants to the farm-bureau managers located in 55 counties of the State. It will be the duty of these assistant farm bureau agents to devote themselves to the placing of farm labor during the coming season. A plan of cooperation between the county farm bureaus and the State bureau of employment has been worked out, whereby the assistant farm bureau managers are to work in direct cooperation with the farm-labor specialists. The State has been divided into five zones, the headquarters of these zones being respectively in Buffalo, Rochester, Syracuse, Albany and New York City. Farm-labor specialists will be located in the State public employment offices in each of these cities, and each office will be the clearing house for its zone. In this way, direct connection will obtain between the farmers and such available farm-hand supply as can be found throughout the State. A direct chain of organization is effected, commencing with the superintendents of the different employment offices of the State bureau of employment. Each superintendent is responsible for his own zone, the

chain of connection continuing on through the farm-labor specialists and the assistant county farm bureau managers direct to the farmer needing help.

It is hoped that later in the season additional help can be given to the farmers by adding a number of women and boys to the available farm labor supply. To the end that the farmer be given as much aid as possible, very careful selection will be made of the women chosen to be sent out. In the main, these women will work in units (camps) and the work will principally be carried on in the intensive agricultural districts, such as the fruit, berry and vegetable producing sections. The use of woman labor on the farm is not an experiment, because it was successfully carried out in several portions of the State last season. Its success is going to depend largely on the careful selection of the women.

Boys between the ages of 16 and 21 are now being enlisted for farm work, and they will be sent out to camps and also to individual farmers. In both cases, some sort of supervision will be provided. It is hoped that this supervision will principally come from school teachers, who will go with the boys from the large industrial centers, particularly New York City. The department of education has laid down the rules under which boys will be allowed to leave school before the end of the school year. A very large number of boys who have been out of school for some time are included in this enrollment and they will be given the same supervision as the boys coming from school.

OPERATIONS OF NEW YORK STATE EMPLOYMENT OFFICES, MARCH, 1918.

	Persons asked for by employers.			Persons applying for work—registrations and renewals.			Persons referred to positions.			Persons reported as placed.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females	Total.
Greater New York	2,485	2,037	4,522	1,794	1,310	3,104	2,332	1,718	4,050	1,021	1,303	2,324
Syracuse	1,214	653	1,867	803	361	1,164	958	531	1,489	637	366	1,003
Rochester	1,877	1,130	3,007	1,479	624	2,103	1,542	776	2,318	679	534	1,213
Buffalo	1,752	997	2,749	1,377	366	1,743	1,564	905	2,469	861	746	1,607
Albany	617	379	996	632	218	850	636	322	958	379	162	541
Total	7,945	5,196	13,141	6,085	2,879	8,964	7,032	4,252	11,284	3,577	3,111	6,688
Total, March, 1917	5,113	3,778	8,891	5,135	1,864	6,999	5,229	3,281	8,510	3,067	2,258	5,325
Clearing house for Greater New York	2,350	600	2,950	.....	.....	.....	2,001	687	2,688	1,297	275	1,572
Total, from opening to Apr. 1, 1918:												
Cities	157,367	105,199	262,566	182,420	75,535	257,955	159,822	101,241	261,063	95,201	66,656	161,857
Clearing house for Greater New York	7,667	4,511	12,178	.....	.....	.....	6,967	4,115	11,082	3,072	1,255	4,327

PERSONS ASKED FOR BY EMPLOYERS AND PLACES FILLED BY NEW YORK STATE EMPLOYMENT OFFICES, CLASSIFIED BY OCCUPATIONAL GROUPS.

Occupational group.	Persons asked for by employers.			Persons reported as placed.			Clearing house.
	Males.[1]	Females.[1]	Total.[1]	Males.[1]	Females.[1]	Total.[1]	
Agricultural products	1,083	9	1,092	539	6	545	.....
Building and construction	2,509	.....	2,509	1,278	.....	1,278	1,088
Domestic and hotel service	1,124	3,566	4,690	632	2,559	3,191	157
Manufacturing pursuits	2,234	1,446	3,680	751	501	1,252	319
Trade and transportation	995	175	1,170	377	45	422	8
Total	7,945	5,196	13,141	3,577	3,111	6,688	1,572

[1] Exclusive of clearing-house figures.

EMPLOYMENT IN OHIO IN MARCH, 1918.

The following table, issued by the Ohio branch of the Council of National Defense, shows the work of the labor exchanges of Ohio during March, 1918:

OPERATIONS OF FREE LABOR EXCHANGES OF OHIO, MONTH ENDING MAR. 30, 1918.

City.	Persons applying for work.			Persons asked for by employers.	Persons referred to positions.	Persons reported as placed.	Persons referred to another office.
	New registrations	Renewals.	Total.				
Males.							
Akron	782	1,273	2,055	1,432	1,241	981	6
Athens	25	55	80	67	50	37	.....
Canton	414	208	622	540	501	326	.....
Chillicothe	319	234	553	470	430	366	11
Cincinnati	1,225	2,004	3,229	1,647	1,744	1,374	19
Cleveland	1,824	4,658	6,482	4,040	3,688	3,146	.....
Columbus	779	2,054	2,833	2,281	2,080	1,498	41
Dayton	1,455	1,494	2,949	2,453	2,153	1,954	.....
Hamilton	168	38	206	290	203	174	.....
Lima	295	255	550	523	364	318	.....
Mansfield	772	594	1,366	1,825	1,265	1,194	.....
Marietta	118	116	234	268	202	164	1
Marion	341	174	515	519	419	359	2
Portsmouth	611	120	731	787	614	451	334
Sandusky	165	64	229	323	186	131	.....
Springfield	375	390	765	580	451	282	1
Steubenville	394	256	650	591	510	365	5
Tiffin	329	129	458	383	320	271	14
Toledo	1,404	3,207	4,611	3,018	3,064	2,537	50
Washington C. H.	107	55	162	200	130	97	3
Youngstown	888	1,067	1,955	1,513	1,298	1,119	4
Zanesville	213	114	327	180	212	149	20
Total	13,003	18,559	31,562	23,960	21,125	17,284	511
Females.							
Akron	185	1,059	1,244	1,322	986	859	.....
Athens	1	2	3	7	1	.....	.....
Canton	47	35	82	86	63	49	.....
Chillicothe	83	72	155	115	93	79	.....
Cincinnati	269	886	1,155	883	718	629	.....
Cleveland	858	4,064	4,922	4,506	3,964	3,216	.....
Columbus	241	1,540	1,781	1,633	1,509	1,328	.....
Dayton	165	307	472	381	395	218	.....
Hamilton	6	14	20	23	19	16	.....
Lima	24	6	30	16	16	12	.....
Mansfield	89	34	123	138	116	110	.....
Marietta	33	41	74	86	69	52	.....
Marion	35	77	112	69	63	48	.....
Portsmouth	39	52	91	116	89	71	.....
Sandusky	24	22	46	49	28	17	.....
Springfield	33	34	67	54	46	18	.....
Steubenville	25	159	184	163	138	122	.....
Tiffin	8	9	17	18	11	8	.....
Toledo	212	547	759	761	541	450	.....
Washington C. H.	6	5	11	26	8	7	.....
Youngstown	74	558	632	570	542	533	.....
Zanesville	43	64	107	84	82	62	.....
Total	2,500	9,587	12,087	11,106	9,389	7,935	.....
Total.							
Akron	967	2,332	3,299	2,754	2,227	1,840	6
Athens	26	57	83	74	51	37	.....
Canton	461	243	704	626	564	375	.....
Chillicothe	402	306	708	585	523	445	11
Cincinnati	1,494	2,890	4,384	2,530	2,482	1,994	19
Cleveland	2,682	8,722	11,404	8,546	7,652	6,362	.....
Columbus	1,020	3,594	4,614	3,914	3,589	2,826	41
Dayton	1,620	1,801	3,421	2,834	2,458	2,202	.....
Hamilton	174	52	226	313	222	190	.....
Lima	319	261	580	539	380	330	.....
Mansfield	861	628	1,489	1,963	1,381	1,304	.....

OPERATIONS OF FREE LABOR EXCHANGES OF OHIO, MONTH ENDING MAR. 30, 1918—Concluded.

City.	Persons applying for work.			Persons asked for by employers.	Persons referred to positions.	Persons reported as placed.	Persons referred to another office.
	New registrations	Renewals.	Total.				
Total—Concluded.							
Marietta	151	157	308	354	262	216	1
Marion	376	251	627	588	482	407	2
Portsmouth	650	172	822	903	694	522	334
Sandusky	189	86	275	372	214	148	.....
Springfield	408	424	832	634	497	300	1
Steubenville	419	415	834	754	648	487	5
Tiffin	337	138	475	401	331	279	14
Toledo	1,616	3,754	5,370	3,779	3,605	2,987	50
Washington C. H.	113	60	173	226	138	104	3
Youngstown	962	1,625	2,587	2,113	1,840	1,643	4
Zanesville	256	178	434	264	294	211	20
Total	15,503	28,146	43,649	35,066	30,505	25,219	511

LABOR DISTRIBUTION OFFICES IN GERMANY.[1]

In order to meet the shortage of labor in time of high pressure, especially of skilled labor in transportation and communication, recourse has lately been had in Germany to a new method, viz, the establishment of special labor and distribution offices (*Arbeiterausgleichstellen*). Such an office, established as a limited liability company, was formed in October, 1917, for the Leipzig district by the Leipzig office of the War Office (*Kriegsamt*) in agreement with the local commercial and industrial circles. The authorized capital of the company amounts to 22,000 marks ($5,236).

The machinery of the office is as follows:

The company secures for itself a labor nucleus, consisting of 20 hands, among them being some women, whose services are always available, who are paid wages by the company on the customary or agreed-upon scale, and are sent out to work as individual firms, authorities, etc., need them. The employer for the time being pays the company for them, according to the labor supplied, a sum equal to that of the wages and a supplementary sum to cover the administrative expenses of the company. This means that the company, not the individual owner of the establishment to whom the workmen are temporarily assigned, is the actual employer. The company is formed on true business lines, owing to the capital required and the risks involved. Direct connections with the municipal labor exchange have been established, and the whole business of the office is carried on in the premises of the exchange by officials specially appointed for the purpose. That the Kriegsamt keeps a watchful eye on the wages to be paid must not be regarded in any way adequate, says the Correspondenzblatt. This is also

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands. Berlin, Dec. 22, 1917.

the opinion of the municipal labor exchange, which has unanimously proposed that a representative of labor should be appointed to cooperate in this work.

UNEMPLOYMENT LEGISLATION IN SWEDEN.

Following is a translation of the Swedish law of May 19, 1916, which grants assistance to persons unemployed and without resources, and provides for contributions by the State for that purpose: [1]

ARTICLE 1. When a commune or a landsting (provincial representative body) grants municipal aid to persons without employment, in conformity with the provisions of existing law, it shall be entitled to a contribution from the State, subject to the following provisions: The State contributions are limited to Swedish citizens, or their families, of good morals, domiciled in Sweden, who (1) have completed their fifteenth year; (2) who are unemployed; (3) who within the preceding six months have not been in receipt of public assistance, unless such assistance was given only occasionally or in case of sickness of themselves or of members of the family, and unless they had made every effort to provide suitably for the family, but, by reason of particularly grave circumstances, were forced to accept public aid to provide for the indispensable requirements of the family; (4) who have applied to public labor exchanges for employment, but without result; (5) who by reason of stoppage of work, not due to their own act, lasting at least 6 days after the application for assistance, are in need of such assistance. Assistance shall not be given for the period before the date of application for aid.

ART. 2. The application may be addressed to the committee on assistance, as provided by law, in the commune in which the applicant resides, or, in default of such committee, to the communal authority. The application shall be accompanied by a certificate of the priest and a statement showing the occupation of the applicant, his last working place, length of service, and name of employer. This statement may be made out by the employer, the association of which the applicant is a member, or two other persons. When the applicant is not domiciled in the commune, and therefore can not receive the allowance mentioned below in articles 7 and 8, the competent committee or the communal authority may transmit his application to the commune of his birth.

ART. 3. Upon receipt of an application the committee or communal authority shall endeavor to procure work for the unemployed person. Failing in this and upon establishing the degree of need of the applicant the committee shall notify him relative to the action taken and if assistance is granted, its amount, date on which it begins, and manner of payment.

In determining the amount of assistance to be granted no account shall be taken of the value of personal property, tools, or revenues from saving funds or dwelling, belonging to the applicant.

An allowance made by the employer or from any unemployment fund shall not be a bar to the allowance provided for by this law, but in no case, however, shall the aggregate of these allowances exceed two-thirds of the usual wage paid in the locality to a laborer of the same ability and working in the same occupation.

ART. 4. The allowance is distributed by the committee and the communal authorities. It may be paid either in cash or in kind, wholly or partly, in articles of food, tools, or clothing.

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[1] Institut International d'Agriculture. Annuaire International de Législation d'Agricole. VIème année, 1916, p. 1227.

ART. 5. When a person in receipt of an allowance is reemployed, the allowance shall cease. When employment ends the competent authority shall decide upon the date on which allowance shall again begin, and its amount.

ART. 6. When a person in receipt of an allowance leads an intemperate life, or is addicted to drink, the committee or communal authority may decide to suspend the allowance.

The beneficiary must register with the local employment bureau, accept work which may be secured for him, and report all employment subsequently secured, and the date of leaving the locality in which he is employed.

When so ordered by the committee or communal authority, he must diligently attend courses which may be opened for the instruction of unemployed persons. Upon refusal to conform to these provisions further allowance may be withdrawn.

In all cases above mentioned, the allowance may be entirely or partially suspended, either for a stated time or permanently.

ART. 7. Allowance may be made, as a general rule, only to the applicant in the commune of his birth, but it may also be made to another member of his family, provided the latter has an established residence in the commune and can be more easily aided there than in the commune of the applicant's birth.

In case an allowance is refused, travel allowance may be granted to cover expense of return to birthplace, one-half of which will be paid by the State.

ART. 8. [1]

ART. 9. The amount contributed for each person by the State shall be equal to the amount accorded from the communal or landsting funds, but in no case shall the daily allowance exceed 75 ore (18.8 cents) for husband and wife together; 50 ore (12.5 cents) for one person alone over 18 years of age; 30 ore (7.5 cents) for one person alone over 15 and under 18 years of age; and 15 ore (3.8 cents) for each child under 15 years of age.

Only in exceptional cases will State aid be allowed an unemployed person having no family under his charge.

When a person having a family under his charge is employed in a commune other than his home, and his wages are not sufficient to support his family living in his home commune, an allowance not exceeding 50 ore (12.5 cents) per day or 75 ore (18.8 cents) per day when there are children may be made in exceptional cases to his family from the State fund.

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[1] Not given in Annuaire International de Legislation d'Agricole.

LABOR ORGANIZATIONS.

TRADE-UNIONS IN DENMARK.

At the close of 1916 the trade-unions of Denmark had an enrolled membership of over 189,000, organized in over 1,930 unions. There has been a gradual increase in membership since 1914, accompanied by a slight decline in the amounts paid in trade-union benefits—unemployment and travel benefits, and sick and accident benefits. In 1916 the benefits paid by federations affiliated to the general national federation (*De Samvirkende Fagforbund*) were distributed as follows: 84.8 per cent as unemployment and travel benefits, and 15.2 per cent as sickness and accident benefits.

MEMBERSHIP AND EXPENDITURES OF TRADE-UNIONS IN DENMARK, 1914 TO 1916.

[Statistisk aarbog, 1917. Copenhagen, 1917, p. 160.]

Federations and unions.	Number of organizations in 1916.	Membership.			Expenditures for travel, unemployment, sickness and accident benefits.		
		1916	1915	1914	1916	1915	1914
General Federation of Trade-Unions (De Samvirkende Fagforbund).							
Municipal employees' federation (Arbejderforbund, Kommunalt)	12	5,173	4,785	4,366	$155	$2,289	$1,789
Women's municipal employees' federation (Arbejderforbund, Kommunalt, Kvindeligt)	28	3,900	3,698	2,838	7,182	5,645	3,089
Danish federation of day laborers (Arbejdsmandsforbund, Dansk)	240	50,923	43,847	40,156	221,890	228,225	194,608
Bakers' and confectioners' federation (Bageri- og Konditorarbejderforbund)	43	3,020	2,812	2,512	15,718	16,382	15,576
Barbers', hairdressers' and wig makers' federation (Barber-, Frisør-og Parykmagerforbundet)	75	1,050	800	478	459	1,094	273
Bookbinders' federation (Bogbinderforbundet i Danmark)	9	2,005	1,247	1,340	1,853	5,398	10,185
Coopers' federation (Bødkerforbundet i Danmark)	23	792	774	723	6,929	4,666	8,552
Electrical workers' federation (Elektrikerforbund, Dansk)	21	1,750	1,596	1,472	4,950	5,977	3,090
Molders' federation (Formerforbund, Dansk)	48	1,600	1,475	1,475	8,002	9,089	16,640
Horticultural workers' federation (Gartnerforbund, Dansk)	6	425	313	(1)	02	(1)	(1)
Glass workers' federation (Glasarbejderforbund, Dansk)	6	461	453	380	5,311	2,546	1,223
Gold and silversmiths' and electroplaters' federation (Guld-, sølv-og elektropletarbejdernes forbund)	14	735	615	513	140	523	1,621
Brass workers' and metal workers' federation (Gørtler-og metalarbejderforbund i Danmark)	6	421	387	(1)	321	(1)	( )
Hatters' federation (Hattearbejderforbundet i Danmark)	3	417	387	(1)	1,110	(1)	(1)
Carriage makers' federation (Karetmagerforbund, Dansk)	28	910	914	873	1,007	3,089	4,539
Water tenders' and firemen's federation (Kedel-og maskinpasser forbund)	48	1,774	1,693	1,517	3,618	3,520	3,230
Ceramic workers' federation (Keramisk forbund)	3	922	805	765	(1)	75	24
Lithographers' federation (Lithografisk forbund)	8	495	466	440	997	1,440	2,208
Painters' federation (Malerforbundet i Danmark)	63	4,635	4,401	4,530	41,814	38,498	35,223

[1] Not reported.

MEMBERSHIP AND EXPENDITURES OF TRADE-UNIONS IN DENMARK, 1914 TO 1916—Concluded.

Federations and unions.	Number of organizations in 1916.	Membership.			Expenditures for travel, unemployment, sickness and accident benefits.		
		1916	1915	1914	1916	1915	1914
General Federation of Trade-Unions (De Samvirkende Fagforbund)—Concluded.							
Millers' and mill workers' federation (Møllerlarbejderforbund, Dansk)	24	630	550	550	$927	$851	$1,165
Paper makers' federation (Papirindustriarbejdernes forbund)	9	1,234	1,129	1,130	597	663	453
Saddle makers' and upholsterers' federation (Sadelmager- og tapetsererforbund, Skandinavisk)	43	1,441	1,250	1,186	5,734	3,356	7,457
Shipwrights' federation (Skibstømrerforbund, Dansk)	20	466	418	400	430	3	.....
Boot and shoe workers' federation (Skotøjsarbejderforbund, Dansk)	49	3,570	3,189	2,930	3,092	6,904	8,199
Tailors' federation (Skræderforbund, Dansk)	73	6,560	5,429	4,415	6,546	11,104	12,487
Slaughter-house workers' federation (Slagterlarbejderforbund, Dansk)	64	3,809	3,675	3,514	20,932	23,649	9,771
Blacksmiths' and machinists' federation (Smede-og maskinarbejderforbund, Dansk)	60	16,034	14,421	13,323	35,412	32,746	46,304
Cabinetworkers' federation (Snedkerforbundet i Danmark)	78	8,050	7,000	6,900	18,485	61,117	70,665
Stonemakers' federation (Stenarbejderforbund, Dansk)	19	494	474	480	(1)	308	134
Candy, chocolate and biscuit makers' federation (Sukkervare, chocolade-og biskuitarbejderforbund)	5	770	624	565	916	899	1,685
Textile workers' federation (Tekstilarbejderforbund, Dansk)	35	7,745	6,695	5,434	4,929	5,720	19,082
Tobacco workers' federation (Tobaksarbejderforbund i Danmark)	23	6,950	6,442	5,920	11,068	8,381	24,462
Woodworkers' federation (Træindustriarbejderforbundet i Danmark)	65	3,141	2,750	2,427	4,861	7,558	9,106
Typographical federation (Typografforbund, Dansk)	55	4,348	4,110	3,907	47,179	53,694	55,015
Other organizations [2]	162	3,872	4,152	4,070	4,417	15,766	18,937
Total	1,468	150,522	133,776	121,529	487,584	559,173	599,793
Unions not affiliated with the General Federation.							
Day laborers' federation of Gentofte and Lyngby (Arbejdsmændenes forbund for Gentofte og Lyngby)	1	670	800	(1)	(1)	5,853	(1)
Tinners' federation (Blikkenslagerbundet i Danmark)	27	1,211	1,160	1,100	(1)	9,261	9,272
Brewery and distillery workers' federation (Brygg-og brænderiarbejderforbund)	44	4,094	3,971	3,914	(1)	2,713	2,546
Druggists' union (Farmaceutforening, Dansk)	(1)	830	800	(1)	(1)	(1)	(1)
Clerks' and office assistants' federation (Handels-og kontormedhjælp forbund)	77	5,469	4,630	4,230	(1)	2,424	(1)
Maid servants' federation (Husassistenternes forbund)	18	785	520	476	(1)	5	.....
Railroad workers' federation (Jernbaneforbund, Dansk)	18	7,310	5,998	5,830	(1)	3,251	1,806
Waiters' federation (Kelnerforbund, Dansk)	12	1,473	1,344	1,153	(1)	5,573	4,415
Agricultural workers' federation (Landarbejderforbundet)	53	1,600	1,160	1,600	(1)	(1)	(1)
Masons' federation (Murerforbundet i Danmark)	98	6,638	6,401	5,805	(1)	101,811	64,490
Tobacco (chewing) workers' federation (Skraatobaksarbejdernesforbund)	17	759	702	612	(1)	778	1,005
Marine firemen's federation (Søfyrbødernes forbund)	(1)	(1)	2,200	1,200	(1)	1,183	(1)
Carpenters' federation (Tømrerforbund, Dansk)	100	5,253	4,897	4,421	(1)	(1)	(1)
Storage and warehouse workers' union of 1890 (Lager-og pakhusarbejderfagforening af 1890)	(1)	(1)	717	652	(1)	973	931
Masons' helpers union of Copenhagen (Murarbejdamandsfagforening i København)	1	985	850	850	(1)	1,011	14,212
Longshoremen's union (Skibsværftsarbejdernes fagforening)	1	1,400	(1)	(1)	(1)	(1)	(1)
Other organizations [2]	(1)	(1)	4,289	2,791	(1)	2,119	364

[1] Not reported. [2] Includes all federations having less than 400 members each in 1916.

SWISS TRADE-UNIONS IN 1916.[1]

The Swiss "Gewerkschaftliche Rundschau" recently published an extensive report on the activities and situation of the Swiss trade-unions during the year 1916. The numerous statistical data given in this report show that in Switzerland, like in all other European countries, the trade-union movement suffered a considerable set-back during the first year of the War but that in 1916 the movement again gained in strength and recovered its membership losses.

The membership, which in the 21 central federations at the end of 1914 was 74,675 (of which 7,451 were female members), had risen at the end of 1916 to 88,648 (of which 10,876 were female members). These figures represent an increase in membership of 13 per cent. During the same period the receipts of the trade-unions increased by 60 per cent and the disbursements by 50 per cent. The largest increases of membership are reported by the metal workers' and watchmakers' federation (21,682, among which were 4,600 female members); the federation of transportation and mercantile workers (3,710), the woodworkers (2,155), and the printing trade workers (1,076).

The total receipts for the year 1916 amounted to 2,164,078 francs ($417,667.05) and the capital at the end of that year was 3,589,061.48 francs ($692,688.87). In the total receipts contributions participated with 1,038,027.35 francs ($200,339.28), initiation fees with 8,202 francs ($1,582.99), sick fund premiums with 660,710 francs ($127,517.03), unemployment insurance premiums with 35,322.30 francs ($6,817.20), and subsidies to the unemployment and sick funds with 67,904.48 francs ($13,105.56). The decrease in receipts during 1915, which was equivalent to 38 per cent, has been largely made up in 1916.

The total expenditures of the federations in 1916 amounted to 1,716,971.17 francs ($331,375.44). The principal items of the expenditures were: Sickness benefits, 557,398.85 francs ($107,577.98); strike benefits, 147,243.90 francs ($28,418.07); unemployment benefits, 158,060.20 francs ($30,505.62); death benefits and invalidity pensions, 163,467.95 francs ($31,549.31); central administration, 304,463.16 francs ($58,761.39); and publication of the organ of the central federation, 148,091.23 francs ($28,581.61). Of unemployment benefits the printing trades' workers received the largest amount—84,450 francs ($16,298.85); the textile workers with 23,911 francs ($4,614.82), the woodworkers with 11,639 francs ($2,246.33), and the metal workers with 11,437 francs ($2,207.34) come next in the order named. The largest amount of strike benefits, 77,381 francs ($14,934.53), was received by the printing trade

[1] Internationale Korrespondenz. Ausgabe W. Vol. 4, No. 63. Berlin, Jan. 4, 1918.

workers, the metal workers coming next with 27,019 francs ($5,214.67). It is to be noted that many federations did not make contributions to the international organizations.

With respect to wage movements the year 1916 was a record year, as may be seen from the following table:

WAGE MOVEMENTS IN SWITZERLAND, 1911, 1914, 1916.

	1911	1914	1916
Number of wage movements	360	186	814
Number of workers affected	39,793	19,219	144,759
Number of organized workers affected	27,429	12,350	69,678
Number of workers who obtained wage increases			117,955
Total wage increases per week			$61,783.74
Weekly wage increase per worker			.52

In 52 cases affecting 10,091 workers shorter hours of labor were obtained. These figured on an average 2½ hours per worker and week, or a total of 24,996 hours per week for all workers affected. Of the 814 wage movements, 34 led to strikes by which 3,329 workers were affected. Most of these strikes were of brief duration and terminated favorably for the strikers.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE.

HEALTH INSURANCE BILL IN THE NEW YORK LEGISLATURE.

The subject of health insurance seems to have attained a position of prominence among the social and labor problems of the day, if the fact that nine State legislatures in 1917 provided for commissions to make investigations and report legislation thereon may be regarded as significant. One is reminded of the early days of the movement for workmen's compensation laws, when State after State took a corresponding step, investigation being followed by legislation in almost every instance. A few health insurance commissions had been provided for earlier, and bills were introduced in some States before last year, but thus far no enactment of law has resulted. The results of the educative processes that have been carried on by the friends of such a measure are becoming evident, however, one of the most interesting being a series of reports by the New York State Federation of Labor indorsing and explaining the bill now before the New York Legislature providing for a compulsory system of health insurance for employees and dependent members of their families. This measure was drafted by a special committee on health appointed at the convention of the State Federation of Labor in 1916, and is the result of more than a year's work by this committee.

Funds maintained by contributions made in equal proportions by employers and employees are provided for, the State bearing only the administrative expenses. The funds are of three classes—local, trade, and establishment—local and trade funds being corporations, controlled by boards of directors, while establishment funds are, as their name indicates, funds connected only with the individual establishments and supported by the employer and employees interested. Each fund is to contribute to a guaranty deposit, to be in the custody of the State treasurer, and to be available, in the discretion of the industrial commission, in cases of epidemic, catastrophe, or other unusual conditions.

Contributions to the funds are to be of an amount sufficient to cover the benefits contemplated by the act, and are to be made by the employer direct for himself and on behalf of his workmen, payments of the latter class being deducted from the wage payments. No employee whose wages do not exceed $5 per week shall be required to make any contributions, the employer in such cases bearing the

whole expense. If payments are more than $5 but less than $9, the employer pays three-fourths of the expense and the employee one-fourth, while employees receiving $9 or more bear half the expense of the benefits.

Benefits consist of medical, surgical, and nursing attendance and treatment and supplies for the insured workmen and the dependent members of his family, including hospital or sanatorium treatment where necessary; dental treatment for insured persons in so far as necessary extraction and filling of teeth are concerned, with additional work if the funds are sufficient; a cash sickness benefit to insured persons, and a cash benefit to dependent members of an insured person's family while he is in the hospital or sanatorium; medical, surgical, and obstetrical aid and cash maternity benefits for insured women, and medical, surgical, and obstetrical aid for the wives of insured workmen; and a funeral benefit for insured persons, similar benefits being allowed for members of the family if the resources of the fund warrant them. Medical, surgical, and nursing care are limited to 26 weeks of disability in any one year, and may not be furnished for a longer period on account of the same case of disability. Cash benefits begin with the fourth day of disability, weekly payments being paid equal to two-thirds of the insured person's earnings, but not more than $8 per week nor less than $5, unless such earnings are under $5 per week, when the cash benefit is to equal the full weekly earnings. Such benefits are limited to 26 weekly payments in any one year, or for the same case of disability, but this may be extended to not more than 52 weeks if the fund is found to be adequate. Maternity benefits cover a period of 8 weeks, and are at the same rate as the regular sickness benefit; these are to be paid only on certification by the medical officer that the beneficiary is not engaged in gainful employment during the period of payment. Funeral benefits are limited to $100.

Administration is to be by the industrial commission of the State, which is to divide the State into districts, supervise the establishment of trade funds, approve the commencement of business by any fund on a showing of its readiness therefor and a submission of an appropriate constitution for the guidance of the directors of such fund. Local and trade funds will be supervised by boards of not more than 7 members, each board to consist of an equal number of directors chosen by employer members and employee members, and one director additional chosen by a majority vote of these representatives. The board of directors appoints all officers and employees of the fund and fixes their salaries, makes rules and regulations for carrying out the purposes of the fund, and makes contracts with legally qualified physicians, surgeons, dentists, nurses, hospitals, etc., for services in connection with the activities of the fund.

Every employee, by which is meant any person in the service of another under any contract of hire, express or implied, oral or written, is to be a member of the trade fund of the industry or trade in which he is employed if such is in existence in his district, and if not he will be a member of the local fund of the district. Membership is automatic, and without regard to the physical condition of the workman; but the foregoing provisions do not apply to members of establishment funds. Persons employed for brief periods are members, each employer making his proper deductions and contributions, but the problem of the casual employee is not solved by the act, "employees whose employment is not in the usual course of the trade, business, profession, or occupation of the employer," being excepted. Provision is made for periods of unemployment by giving a sort of paid-up insurance for a period of one week for each four weeks of contribution, after which the workman may continue his insurance by paying the full cost, i. e., a contribution equal to the contribution of an employer and the employee. The industry or trade hazard may be made a basis of graded contributions, and if an establishment is found to be abnormally productive of cases of sickness, an additional contribution may be required from the employer without right of deduction from the earnings of his employees; on the other hand, if the sickness hazard of any establishment is below the normal, the employer may have the benefit of a reduced contribution on his part. No person can receive benefits until after three months' payments have been made, though having once become a member it is possible to maintain a continuous membership by voluntary contributions or by the action of trade-unions caring for their members during times of unemployment.

The bill is admittedly the result of an effort on the part of organized labor to draft a measure which would "be advantageous to the cause of the wage earners." On the other hand, the committee was positive in its rejection of suggestions by a number of members of the conference that the State should bear other than the administrative costs, or that the employer should be required to pay a larger proportion or even all of the benefit costs. An earlier bill was objectionable to organized labor in its proposal to make fraternal organizations, of which a considerable number of wage earners are members, a part of the administration of a sickness insurance system. This bill also contained a provision limiting the aggregate benefits payable from the State fund and any fraternal or union fund to an amount not exceeding the wages of the beneficiary. The present measure proposes a smaller benefit from the State fund, but leaves the employee free to carry as much fraternal or union benefit insurance as he desires, and receive the allowances from every source in full, whether it exceeds his wages or not. This plan commended itself especially to union labor

by reason of the fact that the contributions to the State fund for a smaller benefit would be less burdensome, and thus less likely to interfere with the maintenance of trade-union funds. Emphasis is placed on the medical benefit provided by the proposed law, since few trade-unions in the State furnish such benefits, and it is believed that the preventive results of a thorough medical service will go far toward reducing the amount of wages lost through sickness. The keeping of a roster of physicians from which a selection may be made instead of the employment of a single physician or physicians by the employer was also stressed, as avoiding one of the unsatisfactory features of the compensation law of the State.

In connection with this indorsement of the principle of compulsory health insurance by the New York State Federation of Labor, it is of interest to notice a circular letter of March 2, 1918, from the president of the California Federation of Labor in which the same attitude is expressed. An opponent of the movement in California had made the statement that the American Federation of Labor is opposed to health insurance. As to this the letter says in part, "The American Federation of Labor is a democratic organization. We have taken no action as yet, as an organization, in the matter of health insurance. In eleven States organized labor has gone on record for it, the New York Federation of Labor recently passing it without one dissenting vote. Organized labor is on record here in California for health insurance, because we believe that it offers the same protection against the risks of illness that industrial accident insurance now gives against the hazards of industrial injury."

OPERATION OF WASHINGTON'S NEW MEDICAL SYSTEM.

A notable experiment in the field of medical administration under workmen's compensation laws was made in the State of Washington last year. This State, which had previously not required employers to furnish any medical service whatever, amended its law so as to provide for practically unlimited medical and hospital service, one-half of the cost of which was to be borne by the employees. The distinctive feature of the Washington law, however, was its provision for medical administration through local medical aid boards under the supervision of a State board. This medical provision went into effect July 1, 1917. A review of the first three months' experience has just been issued as part of the sixth annual report of the State industrial insurance department.[1]

Briefly, the law provides for a State medical aid board composed of the medical adviser of the industrial insurance department and

[1] Sixth annual report of the industrial insurance department for the 12 months ending Sept. 30, 1917. Olympia, Wash., 1918, pp. 52–56.

one representative each of the employers and employees. The board is authorized to divide the industries of the State into five classes according to hazard. Employers subject to the act are assessed from one to three cents for every working day for each employee, and contributions to the State medical fund are required once a month. Deductions from the employee's wages are authorized by the law. The State board is also authorized to promulgate rules, issue a maximum medical fee bill, approve physicians' and hospital bills, and approve contracts between employers and employees as to hospital benefit funds. In case such a hospital fund is maintained by an industrial establishment the employer and employees must each bear one-half of the cost, and in addition the employer must contribute 10 per cent of his share to the State medical fund, of which the employees are again required to pay one-half. The immediate administration of the medical service, however, is under the supervision of the local medical aid boards. Each of these boards, composed of one representative each of the employer and employees, must provide care and treatment for the injured, report the beginning and termination of disability and the cause of the injury, and also certify the medical bills. In case of disagreement the local board shall appeal to the State medical board.

The State board was immediately confronted with several problems, some of which involved interpretation of the law while others were concerned with administrative difficulties. The first question which presented itself to the board was the classification of industries. No statistics covering the cost of medical treatment were available and the board consequently was compelled to make its classification on the basis of compensation costs, on the assumption that there will be a definite ratio between the average compensation paid per claim per industry and the average cost of medical treatment. Subdivision of the five classes, however, is not permitted, according to the opinion of the attorney general. Under the law as it stands, the careless employer can not be penalized by being placed in a higher group. The other establishments in this class must, in a measure, pay for his accidents unless they maintain so high a standard of accident prevention as to overcome the natural hazard of the industry and justify the board in giving them a lower rate by placing them in the next lowest class.

The contract hospital system presents another problem. Under the law an employer who has obtained the consent of a majority of his workmen may enter into a written contract for their medical treatment, such contract to be submitted to the medical aid board for approval, and to remain in effect for the period of time stipulated therein, but not over three years. The board is authorized to disap-

prove a contract only in case the medical treatment provided does not meet the requirements contemplated by the act. Under the law the employees are required to pay one-half of the medical cost, but the attorney general has held that this provision does not prohibit the employer from requiring employees to contribute a flat amount each month. Several defects of the contract system are pointed out. One is that the medical aid board is prevented from obtaining the necessary statistics to make a proper reclassification. This reclassification then can apply only to firms not under contract. Complaint, too, has been made that employers obtain their employees' consent by means of fraud. One such instance came to the notice of the board but the attorney general again ruled that the board had no power to cancel the contract, remedy for this situation lying in the courts. One clause of the law provides that the acceptance of employment by any workman is tantamount to an acceptance of any existing contract under the law to which the employer is a party. A situation is conceivable—in fact, has arisen—in which a large majority of the present employees were not a party to the original contract. They are therefore bound by the contract although a majority may not favor the contract system.

One of the most difficult problems the State board was called upon to solve is the local medical aid board situation. The framers of the law evidently intended that there should be a local board at each plant. Such local boards were workable in the larger plants but were utterly impracticable in the case of the smaller employers. The board, therefore, divided the State into districts and established a local board in each locality where a physician resides. The larger cities were divided on an industrial basis, six such districts being established in Seattle and five each in Tacoma and Spokane. The State board experienced great difficulty in having the local boards appointed. The employers as a rule refused to serve on the boards because they could not spare the time from their business and since the law allows only $3 a day the workmen did not want to give up good-paying jobs to attend to local board work.

Under the law the injured employees, except in the case of contract hospitals, are permitted to select their own physicians. This has given rise to another difficulty. A workman sustaining a minor injury will usually fail to notify the local board or his employer of his accident. He merely visits a physician to have the wound dressed, and then either returns to work or goes to another locality to look for employment. Consequently the local board first hears of the case when the physician's bill is presented for certification. This means that the board is required to look up the man and investigate the case before it can take action on the bill and that the industrial insur-

ance commission has trouble in securing a report from the employer verifying the case. In an attempt to correct this the medical board has requested the physicians throughout the State to advise an injured man to report the case to the local aid board at once. This has relieved the situation to some extent, though considerable difficulty is still experienced. The doctors also complain that they are unable to find the local board members because they are generally employed in some other occupation and are not easily reached.

There are in force at present 1,155 approved hospital contracts covering approximately 76,000 employees.

REPORT OF WORKMEN'S COMPENSATION BOARD OF NOVA SCOTIA.[1]

The Nova Scotia compensation law of 1915 came into effect by a proclamation of the governor in council on January 1, 1917, following a three months' period of organization. This act superseded an earlier law which had been in operation for about six years. It is compulsory as to an enumerated list of important industries, while those not enumerated may be included on the request of the employer. The board listed over 4,000 industries, many of which were found not to fall within the designated classes, while others were either of such a temporary character, or employed such a small number of workmen, that they were excluded by action of the board. Where a numerical basis was used, the nature of the industry was also considered, so that the exclusion number as a rule ranged from one to five employees; this exclusion, however, was without prejudice to the right of the employer to apply for inclusion under the act.

A central fund is contemplated by the law, discretion being given the board to adopt either a current cost plan or a capitalized reserve plan. The latter plan was adopted, the premiums collected for each year being of an amount sufficient not only to cover the actual disbursements for the year, but also to provide a reserve for future payments for accidents occurring in that year. An accumulation for disaster reserves and the cost of administration are also to be provided for by the annual assessments. The board reports some nervousness at first on the part of employers as to what the rates would be but the rates established were said to be generally satisfactory, and were received "as a relief from the uncertainty and fear which previously existed."

Nine classes of industries were made, and separate income and expenditure accounts are maintained for each. On the basis of income, the most important of these classes is that of coal mining (class 1), this class contributing 47 per cent of the total assessments for the

[1] Report of Workmen's Compensation Board, 1917. Halifax, 1918, 15 pp.

year. The next class in importance is class 5, iron and steel, including manufacture and work; this class contributed 24 per cent of the assessments. Next are class 9, transportation, not including shipping and navigation, which contributed 10 per cent, and class 3, lumber and woodworking, which contributed 4.8 per cent. Expenditures of class 1 amounted to 49 per cent of the total, and of class 5 to 23 per cent, these corresponding closely to the percentages of income. In class 9, however, the expenditures were but 5 per cent of the total expenditures, as against 10 per cent of the income, while in class 3 the expenditures were 8.3 per cent of the total, as against an income of 4.8 per cent. The result of this discrepancy between income and expenditures in class 3 is a deficit in the provisional balance amounting to $22,855. A deficit of $10,275 appears also in class 7, building and construction, and of $8,152 in class 6, manufacturing and operating not otherwise specified; but taking all classes there is a balance of $68,011.

It is interesting to note that the assessments in class 1, coal mining, were adequate to meet a catastrophe which occurred some seven months after the law went into effect, resulting in the death of 65 workmen, and entailing a burden upon the fund of this class of approximately $120,000. Despite this, the fund shows a provisional balance somewhat in excess of $18,000. The year 1918 opens with an added burden due to a still greater calamity in the way of a coal mine disaster producing 88 fatalities, though this of course does not figure in the balances for the year. The most serious catastrophe of all, the great Halifax Harbor explosion, will not devolve upon the compensation fund, being taken care of by the relief commission appointed by the Dominion Government; the losses due to this explosion amount, on a compensation basis, to about $850,000, according to this report.

The total assessment income for the year amounted to $812,367, and the total expenditures, including reserves, to $754,055. Administration expenses met from the fund amounted to $22,872, or 2.8 per cent of the total assessments. However, the Government contributed $5,034 to the administration expenses, which would bring the total cost of administration up to 3.4 per cent of the assessment income.

No general provision is made for medical and surgical aid, but the board is authorized to arrange for special surgical operations or special medical treatment in cases where it appears that such service will conserve the accident fund. This discretion was exercised in a single case, the instance being that of a coal miner whose eye was struck by a piece of coal, a corneal ulcer resulting, causing total blindness of the injured eye. A similar accident had happened to the other eye some

20 years previously, so that the man was entirely blind. Consultation with a specialist led to an operation with the idea of making artificial pupils, the result being that the workman reports himself able to see as well as ever and has resumed his employment at full wages. The expenses of this operation are given as $201.90, which, with the compensation paid, amounts to less than $500; the capitalized value of a permanent benefit for total incapacity, such as would have been required if the operation had not been performed, is given at $4,800, so that as the result of the operation the workman has become an efficient member of society with his self-respect retained, while the fund is saved $4,300, a striking illustration of the importance of thorough, efficient, and liberal provision in this field.

STATE INSURANCE IN QUEENSLAND.

A system of state life insurance was organized in Queensland by the insurance act, 1916. It has been effective since February 1, 1917. It is administered by the State Insurance Office, which also has taken over the administration of the accident insurance of the State established under the workmen's compensation act, 1916, and a fire and a miscellaneous accident insurance business.

The treasurer of the State of Queensland submitted the following report of the business of the office to the legislative assembly: [1]

	Number.	Premiums.
Income (received and due):		
Workers' compensation policies issued	36,687	£188,551 ($917,583.44)
Fire policies issued	5,184	8,164 (39,730.11)
Miscellaneous accident policies issued	74	361 (1,756.81)
Total policies issued	41,945	197,076 (959,070.35)
License fees, interest, etc		5,493 (26,731.68)
Total income		202,569 (985,802.04)
Outgo (paid and provided for):		
(*a*) Claims—		
Workmen's compensation	7,849	116,091 (564,956.85)
Fire	3	744 (3,620.68)
Miscellaneous accident	3	71 (345.52)
Total claims	7,855	116,906 (568,923.05)
(*b*) Expenses—		
Workers' compensation department		23,680 (115,238.72)
Fire, including taxation		3,251 (15,820.99)
Miscellaneous accident		147 (715.38)
Section 27		1,020 (4,963.83)
Total outgo		145,004 (705,661.97)

[1] Parliamentary debates, Queensland, 3d sess., 20th Parliament, 1917, p. 1400.

The expenses have been properly apportioned between the various departments, and reserves have been established for outstanding claims and liabilities.

£4,335 ($21,096.28), the balance of the fire and miscellaneous accident accounts, has been reserved to cover outstanding liabilities in these departments.

£52,153 ($253,802.57), the balance of the workers' compensation account, which represents the net profit in this department for the year, after providing for all liabilities, has been dealt with as under:

	Pounds Sterling.
Balance of preliminary expenses written off	5,584 ($27,174.54)
Transferred to general reserve	20,000 (97,330.00)
Bonus to policy holders	18,717 (91,086.28)
Carried forward	7,852 (38,211.76)

The office has invested the sum of £50,000 ($243,325) in 4½ per cent Government debentures, which were purchased at par.

The sum of £18,717 ($91,086.28), which was paid in bonuses, was distributed on the basis of 10 per cent on ordinary and 50 per cent on household workers' compensation policies this year, an amount which it is hoped to increase next year.

It must not be overlooked also that, in addition to the actual profits earned and distributed by the office, the statutory reductions in fire and accident rates imposed upon insurance companies by the insurance act of 1916 have saved at least another £50,000 ($243,325) per annum to the insuring public.

It is satisfactory to note that the office is receiving the support of all sections of the public in the fire and miscellaneous accident departments, in which a very conservative underwriting policy is being followed, the benefit of which policyholders should receive in the way of substantial cash bonuses in the near future.

INDUSTRIAL POISONS AND DISEASES.

CAUSATION AND PREVENTION OF TRINITROTOLUENE (TNT) POISONING.

BY ALICE HAMILTON, M. D.

In the following pages I have tried to give a summary in non-technical language of a pamphlet just published in London by the Medical Research Committee of the National Health Insurance.[1] Dr. Benjamin Moore with two assistants, T. A. Webster and Dr. G. A. Wyon, undertook on behalf of this committee a thorough research into the causation and prevention of trinitrotoluene poisoning, by means of animal and human experiments and through close observation of actual factory procedure and of the health of men and women exposed in different ways to TNT. The result is a mass of information which will be of great interest and value to physicians and to men in charge of munition plants in the United States.

As an indication of the changes in methods of protection against poisoning which this investigation calls for, the following conclusions may be cited:

1. TNT is absorbed through the skin, and that is the only channel of absorption which is of any practical importance.

2. Consequently elaborate systems of exhaust ventilation to carry off fumes are not necessary, for there is no case on record of poisoning from TNT fumes alone. The wearing of respirators is not advised, since the amount of dust that can be breathed in is too small to be harmful. Dust is dangerous only as it falls on the skin or clothes or on surfaces that must be handled.

3. When TNT is swallowed deliberately by experimenters, the effect is as slight as when the same amount is inhaled.

4. TNT readily makes its way through the skin and is absorbed, setting up in susceptible persons a slowly increasing intoxication.

5. Therefore the prevention of TNT poisoning depends on two factors—first, strict cleanliness of the factory premises, so that there will be as little actual contact with TNT as possible, and second, close watch of workers to eliminate that minority which has a low resistance to TNT. Since, however, it is impossible entirely to protect the skin from contact with TNT in manufacturing and in shell-filling operations, the importance of the second factor becomes

[1] Great Britain. National Health Insurance, Medical Research Committee. The causation and prevention of trinitrotoluene (TNT) poisoning. Special Report Series No. 11. London, 1917, 85 pp.

evident. In spite of the best efforts to do away with all skin contamination there will be inevitably some contact with the poison, and though the majority of workers will be able to tolerate the small amount they absorb, a certain minority will be unable to resist its effects, and it is this group of workmen that must be discovered and removed before actual injury has taken place.

In a word, the prevention of TNT poisoning depends on cleanliness of the work place and ever-watchful medical supervision.

INTRODUCTION.

The explosive TNT was well known before the war, but was supposed to be innocuous; indeed, the particular advantages claimed for it were its high stability, so that it could be relied upon not to explode till intentionally detonated, and its low toxicity. Both properties are possessed by TNT, but not to the degree supposed, and, as a result of too great a reliance upon them, there have been disastrous explosions and fatal forms of poisoning in connection with the manufacture and use of this substance during the War. The work of Dr. Moore and his assistants was undertaken in August, 1915, at the request of the medical inspectors of factories, for they had discovered serious symptoms leading to toxic jaundice among workers with TNT, and the rapidly increasing use of this explosive made the situation one of grave anxiety.

In the absence of specific knowledge of this poison the health authorities could only reason from other similar poisons and consequently the Home Office had recommended precautions against the inhalation of dust and fumes and against skin absorption. It is certain that these precautions did much to keep down the number of fatal cases of poisoning, but it was most desirable to ascertain the actual mode of entrance of the poison in order to know which safeguards were necessary and which nonessential. This work was undertaken by Dr. Moore and continued through 1915, 1916, and 1917.

The first recorded death from TNT occurred in the manufacture of the explosive, in February, 1915, the second in a shell-loading factory in August of that year. Then the cases increased rapidly, reaching their height in the autumn of 1916, but after that the effect of protective measures began to show and in spite of a great increase in the numbers of workers exposed the number of cases fell decidedly. In July and August, 1917, there were only 17 cases with 7 deaths, as compared with 53 cases and 13 deaths in the same months of the preceding year.

As is the case with other nitrocompounds, an immediate and obvious result of TNT absorption is a chemical change in the red coloring matter of the blood corpuscles and a consequent damage to the oxygen-carrying functions of the blood. This shows itself in a darker

color of the blood and in pallor or duskiness of the skin with blueness of the lips—"cyanosis." The failure of oxygen transport and the consequent oxygen famine is shown by breathlessness and air hunger on exertion. If the fresh entry of poison be prevented, what has entered is eliminated and the red blood corpuscles are rapidly restored, the process being greatly aided by abundant fresh air. This explains the beneficial results of several successive holidays for TNT workers.

Cyanosis is an abnormal condition but by itself it does not kill. The fatal results of TNT poisoning have been due to a destruction of liver substance, the so-called "toxic jaundice," and more rarely to a profound anemia, "aplastic anemia" in which the blood-forming organs fail to produce new red corpuscles. At present both forms are incurable and rapidly fatal diseases when once established, and therefore the question of their early detection has been one of the chief practical problems of industrial medicine during the War.

CONSTITUTION AND PROPERTIES OF TRINITROTOLUENE.

The material known as TNT is mainly composed of one of the three isomeric trinitrotoluenes, that one called symmetrical because the three NO_2 groups are symmetrically arranged on the toluene nucleus. The commercial variety contains also insignificant quantities of the other two isomers and a variable percentage of mono and di nitrotoluenes, together with small amounts of nitrated methanes and other substances. The pure product is a hard crystalline powder, almost odorless, melting at 82° C. at which temperature it sublimes slowly. At atmospheric temperatures its vapor pressure is low and, as will be shown below, practically none is present in factory air as vapor.

The question has often been discussed whether all the manifestations of TNT sickness are due to absorption of pure TNT or are due to one or more of the impurities commonly present. Some have suggested that trinitrotoluene causes the cyanosis and the minor form of poisoning, but that toxic jaundice may be caused by some impurity and aplastic anemia by still another.

Though it is very difficult to prove that all these effects are due to trinitrotoluene and to it alone, yet it can be said as a result of experiments on animals and on men with the pure body and with the impurities that all these effects can be set up by the pure substance and that probably all are closely connected in their mode of causation. Pure TNT causes cyanosis and workers exposed to it alone have also developed toxic jaundice and died, while there is no evidence that workers with crude TNT have been any more severely affected than workers with the purer qualities. Samples of the various impurities found in crude TNT were placed at the disposal of Dr. Moore and tested, but none of them showed a higher degree of toxicity than trinitrotoluene itself. A very poisonous compound, tetranitrome-

thane, is present in the crude product, but only in minute quantities, about 0.12 per cent, and even this is in great part removed before TNT reaches the shell-loading factories.

CHANNELS OF ABSORPTION.

Fume inhalation.—The preventive measures at first adopted were directed against the inhalation of fumes and dust, the breathing of operatives was incommoded by the use of respirators even in places where the air was almost guiltless of dust, and time, labor, and money were expended on elaborate systems of fan ventilation in factories situated in open country where the natural ventilation was excellent.

In the effort to test the fume theory of poisoning, different kinds of animals were exposed for days to the strongest fumes of heated crude TNT but showed no effects. The experiments were repeated inside the factory, cages being suspended over melting pans in a position where exposure to fumes was worse than that endured by any workman, but even after months of such treatment the animals continued fat and healthy. Kittens were the only animals that developed cyanosis after excessive exposure, cats being especially susceptible to TNT.

Swallowing dust or inhaling dust.—The reason for the earlier belief that fume rather than dust was the causative agent in TNT poisoning was that the earlier cases appeared exclusively among workers with hot molten TNT and not among those who were exposed to dust in large quantity. A few months later, however, there occurred the death of a worker filling "exploder bags" with pure dry TNT, who had never been near molten TNT. In consequence of this a new series of experiments was instituted to test the influence of dust when inhaled and when swallowed.

A sample of these laboratory experiments, selected from many, will suffice. Two rabbits were each given 100 milligrams of TNT with their food daily except Sundays, from October 15 till December 31, 1915, and both not only survived but put on weight. Only when such doses as 500 milligrams, enormously disproportionate to anything which an operative could swallow at work, were given by the mouth was it possible to kill the animal, and then only after three or four rapidly repeated doses.

The investigators then administered to themselves doses of TNT, taking 10 or 15 milligrams daily—amounts about equaling those which air analysis had shown might be taken up from the factory air. Chemical test of the urine showed the presence of TNT in the system, but also showed that it was usually entirely eliminated within 12 hours.

A number of analyses were made of air collected from various parts of several factories and the amount of TNT estimated, taking

as a basis the air breathed in by an adult during a 10½-hour shift. For instance, a factory was selected in which girls were pressing amatol blocks and in which a fatal case of TNT poisoning had recently occurred. The inlet for the air drawn for examination was placed within a foot of the head of a girl serving beside the box of powder. It was found that the maximum amount of TNT absorbable from the air would be 14 milligrams. In a second experiment in another part of the same factory 12 milligrams was the maximum amount, and in a third only a little over 8, the average being 11 milligrams. These observations showed quite conclusively that the amount of TNT entering the system through inhalation is almost negligible. However, it seemed best to extend the investigation so as to be certain that no risk could be run by dispensing entirely with respirators, and for this purpose six girls were induced to wear elaborate Siebe-Gorman respirators, furnished with a long wide rubber tube to bring in air from outside the workshop. The tests made of the urine of these girls showed no decrease in the amount of altered TNT being excreted, although they were wearing the most complete respiratory protection that could be suggested.

Absorption through the skin.—The above experiments having shown of how small importance is absorption from the air by swallowing or breathing, the investigators determined to make experiments in skin absorption upon themselves, exposing only the hands or the feet to the poison. They protected themselves from all other contact with TNT, they proved by the urinary test that their systems were free from the poison, and then they rubbed TNT into the palms of the hands or dusted it into the socks. Dr. Moore produced in himself all the symptoms of a minor attack of TNT illness, with a marked frontal headache, nausea, intermittent abdominal pain, and a feeling of malaise and drowsiness which persisted about two days. It was two weeks before his urine was free from TNT and then he repeated the experiment with the same results. The other two obtained distinct reactions in the urine but slighter than did Dr. Moore, and they suffered no symptoms.

Several experiences in the factories pointed also strongly to the importance of skin absorption of TNT. For instance, two cases of toxic jaundice occurred in women who merely handled dust-covered material, such as shells or waxed blocks, but were not exposed to dust or fume in the air. Another case occurred in the pressing of TNT pellets from pure dry TNT, and a visit showed that the work was carried on in small isolated sheds under almost open-air conditions and that there was no molten TNT near. But the hands of the workers were deeply stained and oily and a test for the presence of TNT in the urine was positive.

The investigators then endeavored to see if by completely protecting the hands they could prevent the absorption of TNT, but it proved to be almost impossible to keep the hands of factory operatives entirely free from contact with TNT. Only in the case of one girl of unusual intelligence and enthusiasm did they manage to keep the hands chemically clean for over a week. This necessitated having her come to the laboratory at the beginning and end of each working period, so that her hands could be tested with alkaline alcohol [1] to make certain that no TNT had penetrated to the skin. Then rubber gloves were put on and bandaged so that no powder could fall in between the glove and hand. The bandage reached from wrist to elbow and protected wrist and forearm, while an ordinary pair of cotton gloves was worn over the rubber gloves to protect them from injury. For nearly a fortnight they were able to keep her hands continually clean, as shown by the alkaline alcohol test. This girl had already been under observation, being one of those who wore the Siebe-Gorman respirator in the former experiment. During the period when she was wearing the respirator and her hands were unprotected her urinary reaction had varied between 2 and 4, which is about the shop average. On the days when her hands were chemically clean the urine showed only slight traces of TNT or none at all.

The difficulty encountered in keeping the hands of operatives chemically clean from TNT induced the experimenters to try the effect of actual factory work on themselves. Accordingly Dr. Moore and a voluntary coworker, Miss M. G. Francis, worked for a week on one of the same machines as used by the factory employees and under similar conditions in the same shop. All protection to mouth and nose was dispensed with, but the hands were thoroughly protected by leather gloves next the skin and rubber gloves outside of these, and at the termination of each working period a negative result was obtained on testing the skin of the hands with alkaline alcohol. On two of the days of the experiment there was a high wind which blew TNT powder into the air and caused the two experimenters to suffer severely from sneezing and running from nose and eyes, yet at the end of the day's shift neither of them showed more than a slight urinary reaction, and this only for a few hours, while the usual employees working alongside had on the average at least five times the intensity of reaction in the urine, although wearing respirators, as was the rule at that time. Their hands, however, were heavily laden with TNT, as could easily be seen when they took off their gloves, while those of the two experimental workers were clean.

Summary.—Dr. Moore sums up as follows the results of his researches into channels of absorption of TNT.

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[1] Alkaline alcohol produces with TNT a bright pink color.

The analysis of the air of one of the chief workshops where most of the cases of toxic jaundice and fatalities have occurred shows very little TNT dust or fume, so that in the investigators' opinion this can not be an important factor.

It has been shown that because too little stress has been laid on the danger of skin absorption, not enough effort is being made to keep all processes clean. As a result persons engaged in cleaning soiled shells with oily rags are often cyanosed and there have been several cases of toxic jaundice among them.

Chipping off and rubbing with oil does not completely remove TNT from the outside of the shells and these go on to the so-called "clean shell store" covered with a film of oily TNT. As a result cyanosis and jaundice have appeared among the operatives in this department and among those who load filled shells onto railway trucks.

Comparative statistics show that those employees who work close to molten TNT have as good a record as to health and attendance as do other workers much more remote from fumes.

Only a minute trace of TNT appeared in the urine of the investigators after remaining for an entire shift close to the point where the molten amatol was poured, and an analysis of the air yielded only 6 milligrams as the amount that could be breathed by a worker during one shift.

Analyses of the records of fatal and nonfatal cases show that a large proportion were shell cleaners and truckers who were exposed to skin contact but only slightly exposed to dust or fume inhalation.

The factory in which these observations were made had at that time the highest incidence both of minor TNT illness and of notified cases of toxic jaundice and deaths from toxic jaundice. It has since become one of the healthiest in the country and the change is attributed to two factors—all the processes are carried out with greater cleanliness, and a medical officer patrols the workshop in order to detect cases of poisoning in the early stages.

DETECTION OF TNT POISONING.

T. A. Webster, one of Dr. Moore's coworkers, devised a test for the presence of modified TNT in the urine, a test which has proved of the utmost value not only for the protection of individuals threatened with TNT poisoning, but also in aiding research into the channels of absorption of TNT. The experiments given above were all checked up by the application of this test to the urine. The test depends upon the fact that the modified TNT which has passed through the system is not removed from the urine by ether as is unmodified TNT, but if the urine be first mixed with an equal volume of 20 per cent sulphuric acid solution and then shaken out with ether, the ether separated and washed free of acid with water, the pink color charac-

teristic both of TNT and of the modified form will appear when alkaline alcohol is added. No accurate way of making the test quantitative is known at present, but each observer must establish for himself a standard for judging various degrees of intensity.

The urines of practically all workers in TNT contain this substance, but in some there is only a minute trace, in others an intense reaction. There may be a high reaction where there is no sign of TNT poisoning, and, on the other hand, there may be poisoning with only a moderate reaction.

The substance is not TNT, but is formed from it by the reduction of one of the nitro groups giving dinitro-hydroxylamino toluene. It has been isolated from the urine of rabbits and a monkey to whom TNT had been administered, and also from human urine after the oral administration of TNT, and from the urine of workers in TNT factories.

The action of TNT on the blood is the same as that of a large class of bodies, including the organic nitro and amino compounds, which possess the common characteristic of acting primarily on the blood, changing the hemoglobin to a varying degree into a mixture of NO-hemoglobin and methemoglobin. Since these can not function as oxygen carriers, it follows that when more than a certain proportion of hemoglobin has been altered by the action of the poison oxygen starvation appears, the symptoms increasing when any exertion is attempted. This is the stage of minor TNT illness and the symptoms complained of are very similar to those of mountain sickness, such as breathlessness, tightening in throat and chest, difficulty in breathing, dizziness, drowziness, nausea, abdominal pains, appetite at first stimulated, then lost.

The changes in appearance observed before any jaundice occurs are also due to the changes in the blood. A drop of blood obtained by pricking shows a venous blue color, which does not soon turn to scarlet when absorbed by blotting paper—a quite characteristic effect which may be useful for diagnostic purposes. There is a normal number of red blood cells and a normal amount of hemoglobin, but evidence of destruction and regeneration of red blood cells is shown by the dark color of the urine during an attack of poisoning and by bile-stained serum.

A rare form in TNT poisoning is aplastic anemia in which without any change in the appearance of the red blood corpuscles there is a profound loss, the number of red cells falling in one case to 1,200,000 per cubic millimeter, and the hemoglobin percentage to 30. The appearance in such cases is that of pernicious anemia, but the examination of the blood elements and of the organs shows that it is a failure of function of the blood-forming tissues only, as a result of TNT absorption.

The general appearance of a person suffering from an early stage of TNT sickness is relied upon by experienced physicians to give warning of a condition requiring attention. There is a pale face, lacking in expression, lips that can scarcely be described as cyanosed, but of an ashen blue color and the same color is seen on the gums. There may be a faint trace of yellow in the whites of the eyes, but the rest of the skin shows no jaundice. When these are observed the physician should question the worker and he is then likely to be told of abdominal pains, dizziness, sleepiness, breathlessness, headache or nausea, and dark-colored urine, but this history may or may not be given, according to whether the worker feels like resting or keeping on with work. The physician must really depend upon the evidence of his own eyes and this can be done well only by those who have experience, not by a visiting physician who sees the workers once a week or once a fortnight. The excitement of going to see the doctor is often enough to disguise the symptoms and it is much better to have the foreman or welfare worker draw attention quietly to those that are suspected. Dr. Moore is emphatic in his belief that medical supervision of such factories as these can be satisfactory only when the physician "patrols" the plant at frequent intervals, familiarizing himself with the workers as they appear normally and thus being able to detect those slight changes which show to the experienced eye the beginning of ill health.

TOXIC JAUNDICE.

Much of the report deals with that serious form of poisoning known as toxic jaundice. Dr. Moore regards both jaundice and fatal anemia as secondary results of the same action of the poison as that which causes the symptoms of cyanosis. His reasoning is based upon experimental evidence and upon a close study of the histories of actual cases. It is unnecessary to go into this controversy here, and it would not be possible to do justice to it in a short review like this. Those who are interested in the question are referred to the complete pamphlet. The important matter from the point of view of prevention is that cyanosis and its accompanying pallor form the best danger signal we possess that liver and bone marrow are in the firing zone and so long as there is in the country a sufficient supply of people insusceptible to TNT, susceptible individuals ought to be removed. It is accordingly unsafe to wait for jaundice as the danger signal. The safe way is to look upon cyanosis as the signal, whether or not we believe that the jaundice is due to a direct effect on the liver or is a later stage of the condition giving rise to the cyanosis.

The action of TNT in forming methemoglobin has as its sequence increased blood destruction, and the products of destruction must be disposed of by the liver and kidneys, while the blood must be regener-

ated by the red marrow. For instance, if four times the normal amount of hemoglobin is katabolised by the liver cells, four times the normal amount of bile pigments will be formed, but if the liver cells can excrete into the bile this increased amount there will be no jaundice and the only effect noticed will be increased biliary pigments in the feces and probably a darkening of the urine. But the liver cells will be working at four times their normal rate. The iron of the hemoglobin may be stored in the liver or sent out at fourfold rate to the red bone marrow to supply the increased demand of new blood corpuscles for iron. This means that the red marrow also has to work at fourfold the normal rate. Now, if the liver fails under this strain there will be jaundice; if the bone marrow fails, aplastic anemia. There may also be a partial breakdown of both liver and red marrow with both anemia and jaundice, or one may succeed the other. A secondary effect is the stimulation of the kidney to excrete through the urine the bile pigments which the liver is unable to get rid of. If this is incomplete the blood serum becomes loaded with bile pigment and the concentration may increase until plasma and all serous fluids become bile stained, and then jaundice is established.

In the great majority of TNT workers a compensatory balance is established, there is no critical breakdown in liver or red marrow or kidney, but any individual who absorbs freely is always in danger. Some intercurrent illness or indiscretion may just tip over the balance and establish a condition which will run down hill of itself when once set going. Such a person ought obviously to be removed and this weeding out of the susceptible should be kept up till the workshops are filled only with those individuals who do not yield to the poison.

Dr. Moore gives a striking instance of the disastrous result which may follow neglect to take seriously what seems to be a case of minor TNT sickness. At one of his visits to a factory the welfare supervisor called his attention to a girl who had typical blue lips and a marked pallor but no yellow in the eyes. On questioning she admitted her appetite was poor, that she had a little nausea, but had never vomited, that she had slight abdominal pains, but not enough to make her stop working. She was told that she had a mild attack and should take some time off, whereupon she began to weep and said she was the only support of an old and infirm father. This conversation occurred on a Monday and it so chanced that there was to be a four days' munition workers' holiday beginning on Wednesday evening. She begged to be allowed to continue at work for the next two days and this was agreed to, provided she would not start work again after the holiday unless she was better. On Wednesday, however, her eyes showed a decided yellow and when she presented herself on Monday morning after the holiday she had a general

jaundice. She was immediately sent into the hospital and at first did not seem very ill in spite of the deep jaundice, indeed she was quite bright and cheerful, but a few days later she grew much worse, became delirious, then comatose, and died. At the post-mortem examination the usual changes of toxic jaundice due to TNT poisoning were found. A clearer case than this of cyanosis and minor TNT illness passing on into toxic jaundice and death could not be found.

PREVENTION OF POISONING.

Ventilation.—In each factory dust-extraction experiments should be made and it will generally be found that many proposed schemes of forced ventilation need not be carried out. The vast majority of TNT workshops are clean, airy, naturally well ventilated, one-story buildings in which analyses show a negligible quantity of TNT dust.

Prevention of skin absorption.—The knowledge that the main absorption occurs through the skin of the hands indicates three lines of action, namely: (1) Keeping clean all that the hands can touch; (2) protecting the hands; (3) detecting those hands which are permeable and keeping their owners away from TNT work.

The provision of machinery to take the place of human labor in shell loading is a matter of the greatest urgency, both because the individual worker will be protected from direct contact with the poison and because the number employed will be smaller. For those who must come in contact with it, protective clothing, gloves, and boots must be provided. The most important of these is the hand covering. These investigators spent much time in designing gloves and glove attachments of various kinds and materials but all broke down in practice. They could protect themselves and a few workers under experiment, but no attempt to drill a band of workers to carry out the same excessive precautions all the time succeeded. Once the TNT gets underneath the gloves as it does with all workshop gloves hitherto tested, the glove is worse than useless, for it holds the powder in closer contact with the skin, induces perspiration, and makes the skin soft and permeable, so that except for very rough work which hurts the skin of girls' hands, bare hands are preferable to gloved ones and in the few cases where gloves must be worn they should be loose, thick, leather ones.

The other portions of workshop clothing ought to be designed to protect the skin and the "bloomer suit" has become very popular for woman munition workers and is much to be preferred to any form of skirt. The legs of the bloomers should end over long Wellington boots. Low shoes should not be allowed, for when worn the skin of the girls' feet becomes decidedly yellow. This is a quite unnecessary area of absorption to add to hands and face. The

work clothing of TNT workers must be kept apart from their home clothing.

Many experiments were made with solvents for TNT and protective varnishes for the skin. Acetone, which is the best solvent, was barred out by its present scarcity, but a mixture of xylenes proved to be a good solvent and a group of 24 girls were instructed to wash their hands in it each day on leaving work. The results proved disappointing, the color of the hands was lighter, but the urinary reaction seemed to run on its usual course. It may be that the solvent made the layers of epidermis more permeable and thus increased absorption. It did actually remove all TNT from the outer layers of the skin as shown by the failure of the alkaline alcohol test.

In spite of this failure, however, Dr. Moore recommends that all workers seriously ill with TNT should when they leave work have the skin thoroughly cleansed, if possible with acetone, for only in that way can continued absorption of the poison be prevented.

They turned their attention next to protective varnishes which could be applied to the skin before starting work and removed at the end of the day. Solutions of acetate of cellulose and collodion such as are used in the various liquid court plasters on the market proved useless, because they would peel off, but finally a water soluble "casein varnish" free from fats and oils was found to give excellent results. The improvement was visible to the girls themselves. Girls were selected who showed the stain on face and hands most deeply and under the use of the varnish the stain almost disappeared in two or three weeks. This preparation also protects against tetryl stain. It is not unsightly in use, as it sinks into the skin and disappears. It has at present one defect, that when kept it tends to thicken and then sometimes lathers and does not become invisible on the skin. When this occurs some of the girls object to using it. In time improvements may be devised which will make it resist hot weather better and not be removed by perspiration, but experience has already shown that for dusty TNT employment protection of the skin of face and hands by a varnish is feasible and that when the skin is thus protected there is a great fall in the amount of TNT absorbed as shown by urinary tests.

Early detection and removal of specially susceptible persons.—There has been some controversy as to whether the same person should be allowed to remain for many months on TNT work even if no symptoms of poisoning are observed. Dr. Moore believes that anyone who has worked for a year or more without symptoms has shown himself insusceptible and should be kept at work as a most valuable asset to the factory. On the other hand, a person who has been ill more than once during a working period of five or six months should be

watched most carefully and laid off at once on the appearance of any considerable cyanosis. In fact he would prefer to remove such susceptibles altogether. He attributes most of the improvement in the healthiness of TNT factories in Great Britain to the cooperation of management and medical staff in this process of weeding out.

A prophylactic measure which has received a very widespread application is that known as alternation of labor. Dr. Moore used to be a hearty supporter of this policy but has changed his views, not because he does not still believe that it is good for the individual worker to have a fortnight of safe work alternate with a fortnight of TNT work, but because there are objections to it from the point of view of the workers as a whole, because there are considerations of output involved, and finally because there are other means by which the end can be achieved with equal certainty and at much less cost.

For alternation of employment, double the number of workers must be employed to work on dangerous material and since the output is not nearly so good under alternation as under continuous employment, the total number of exposures to TNT poisoning is more than double and therefore the difficulty of weeding out the oversusceptible is more than double. Again, the risk of exposure to each individual is by no means reduced to half, for tests made show that the girls working during a fortnight on alternative work do not show the clearance in the urine that is shown by four days of complete holiday. Evidently even while they are "off TNT" they still come in contact with it either through soiled clothing or through soiled woodwork, boxes, trucks, or shells.

Another objection is that this alternation prevents the rapid training of workers in speedier and more skillful methods. The speedier the rate of working, the smaller the number of hands required, the less dust produced, the less molten TNT spilled about, and the less danger of poisoning for everyone. In place of alternation Dr. Moore would put increased medical care for the smaller number of workers and permanent weeding out of the susceptible.

TREATMENT OF CASES.

It ought to be very rare in the future that cases pass unnoticed through cyanosis into toxic jaundice. When this has occurred, as well as in all cases of severe cyanosis, the first essential is a complete removal from all contact with TNT. It is not sufficient simply to instruct the patient and send him home, for these people have little realization of the seriousness of their illness, indeed even after jaundice has appeared they may feel cheerful and well. They carry home TNT on hair, hands, and clothing and in the course of time their furniture and bedding have become contaminated. Such cases,

therefore, ought as a rule not to be treated at home but in a hospital by a physician experienced in TNT cases.

It ought to be emphasized particularly that this is true of the first few days of incipient jaundice, for at this stage the case looks less serious than it does later when the jaundice deepens, and the physician may be inclined to wait a few days and see how the case develops with home treatment and visits to the consulting room, but these days are the all-important ones, far more so than those after jaundice has become deep, for then the physician can but watch and wait and is powerless to give much help. The very first appearance of jaundice shows that compensation is failing and a fight is going on between degeneration and regeneration in the liver cells, with degeneration slowly gaining and no longer enough sound tissue left to carry on the normal functions. If the attack by the poison is prolonged a little more the fight will be decided against the patient. This is the point at which prompt action taken by the physician in completely cutting off contact with the poison makes all the difference.

The patient should be removed at once from the factory to a hospital, all clothing which has been in contact with his body removed, he should be given a warm bath, dried, and wherever the skin has been exposed it should be thoroughly cleaned from all traces of TNT by scrubbing with pledgets of absorbent cotton soaked in acetone or ether until no pink color shows with alkaline alcohol. Special attention should be paid to the palms of the hands. The nails should be cut short and carefully manicured and the roots of the hair cleaned, especially on the scalp. The patient should then be put to bed in a well-aired room and given a purgative. The bowels must be moved as soon as possible and kept open. The urinary secretion and perspiration ought then to be stimulated by a simple saline mixture and this should be kept up for two or three days until Webster's reaction is no longer obtained in the urine and the test remains negative, even after the saline is discontinued.

Fresh vegetable food and fruit are desirable and alkalies should be given, as there is a certain amount of acidosis in some cases.

In slighter cases of cyanosis the patient need not be kept in bed, but an open-air treatment should be given either reclining in the fresh air or with moderate exercise, not enough to bring on breathlessness. In a few days these cases clear up as the methemoglobin breaks up. If, however, the patient be then allowed back on TNT work, he must be carefully watched and if the symptoms recur he must be given a permanent discharge.

According to the report, no person who has ever had toxic jaundice is under any circumstances allowed to go back to TNT employment or to any sort of work in the same factory with TNT workers.

RESOLUTIONS OF THE NEW YORK ACADEMY OF MEDICINE ON OCCUPATIONAL DISEASES.

At a meeting of the New York Academy of Medicine, March 7, 1918, resolutions offered by the public health committee in regard to the industrial disease problem were adopted, as follows:

1. That the matter of the need of instruction in the recognition, treatment and prevention of occupational diseases should be brought to the attention of the authorities of the medical schools of New York City, with a request that a special course be given through at least one term, with particular reference to the numerous poisonous substances used in war industries and their deleterious effects.

2. That special clinics be organized under the auspices of the medical schools in order that occupational diseases may be studied and treated under competent guidance and supervision.

3. That consideration be given to the desirability of the establishment of special clinics, under the auspices of teaching institutions and health agencies, in the neighboring towns of New York City, where large manufacturing and munition plants are located, with a view of facilitating the utilization by the men and women employed in these factories, of the thus established medical opportunities.

4. That the representatives of the large hospitals and dispensaries be impressed with the importance of recording accurately the details of occupation of all patients entering the institutions and collecting data regarding them, and the need of providing adequate facilities for their treatment.

5. That the importance of early recognition of occupational poisons be brought to the attention of medical practitioners of this city, and that they be urged to report such cases promptly to the city department of health in order that better follow-up supervision may be provided.

6. That the medical press be requested to give more space to the discussion of occupational diseases than they have hitherto.

7. That proper educational facilities be established by the State industrial commission and the New York City department of health in order that the large number of men and women working in hazardous trades should understand the nature of the hazards and know how to avoid them and to seek early medical advice when the first symptoms of poisoning appear.

8. That the excellent work done by the division of industrial hygiene of the bureau of preventable diseases of the New York City Health Department be encouraged and means provided for its extension.

9. That the manufacturers be impressed with the importance of safeguarding the health of employees through adequate medical supervision, efficient factory sanitation and the prevention of occupational diseases.

10. That the Federal Government, in the interest of the conservation of the health and efficiency of the workers be requested to cooperate in the effective supervision over the conditions prevailing in factories producing munitions of war and other allied products, through the corps of experts associated with the United States Public Health Service.

The following resolutions relating to associated out-patient clinics were adopted March 20, 1918:

Whereas, there exists a great deal of "occupational disease," and

Whereas, cases of occupational disease are oftentimes not properly diagnosed in the out-patient clinics, and

Whereas it is the duty of the clinics to help in providing the sick with competent medical advice: Therefore,

Be it resolved, That in the interest of the sick and the industrial efficiency of the workers, the attention of the boards of trustees of dispensaries situated in the industrial sections of the city, be called to the need of the early recognition of occupational disease, and that in order to facilitate the work of the physicians in this task, detailed records should be taken as to the occupation of all patients;

That adequate facilities be provided for the treatment of occupational diseases and industrial poisonings; and

That an interest in the study of occupational diseases should be stimulated among the physicians connected with the dispensaries.

DANGERS IN THE MANUFACTURE AND INDUSTRIAL USES OF WOOD ALCOHOL.

The New York State Industrial Commission has caused to be issued an illustrated pamphlet, prepared by the division of industrial hygiene of the State department of labor, setting forth the dangers encountered in the manufacture and industrial uses of wood alcohol.[1] The investigation and the publication of the results thereof were prompted by a belief that little information has been made available in popular form for those who are obliged to work with material containing wood alcohol, and in order that workers may fully realize the dangers from inhaling its vapors or when the liquid comes in contact with the skin. "Complete knowledge of its deleterious effects upon the health must be given to every person handling it, as well as full protection. This is the only guarantee against skin inflammation, blindness, and death." Based on the investigation pursued in this connection, recommendations for the necessary precautions to avert evil effects are made, and if the improvements suggested are carried out "employers will not only protect the health of their employees, but will also conserve much of the product which is now being wasted. Nor will the adoption of the simple rules recommended involve great expense."

Wood alcohol is described as the most dangerous and most prevalent industrial poison of the alcohols used in the various trades. Continuing, the report says:

> It produces toxic effects whether taken internally, inhaled through the lungs, or when coming directly in contact with the skin. Impairment of vision, complete loss of eyesight, and even death result from drinking as well as from inhaling wood alcohol. People working in places where large quantities of wood alcohol were used constantly have died from inhaling the fumes. So dangerous is this poison that in some cases death occurred when persons were subjected only a day or two to the fumes of wood alcohol. Direct action of wood alcohol upon the skin when used externally, although not quite as disastrous, has its serious consequences. It produces inflammation of the skin, and in extreme cases death of the affected organ.

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[1] New York. Department of labor. Division of industrial hygiene. Dangers in the manufacture and industrial uses of wood alcohol. Special bulletin issued under the direction of the industrial commission. No. 86, December, 1917. [Albany, 1917.] 17 pp. Illustrated.

It appears that there are 28 establishments in New York State engaged in the production of this extremely dangerous poison; 400 men are employed. In the process of distillation gases and vapors escape, being a source of danger to the plant or causing irritation to the eyes of the workmen, as well as constituting a loss of product. The report thus briefly describes the manufacture of wood alcohol:

To secure the destructive distillation of wood it is placed in oval or cylindrical iron or steel retorts or ovens and subjected to heat. The retorts are set in brickwork and each retort is provided with a heavy cast-iron, tightly-fitting door. A stack leads from each furnace to the outer air, and an outlet or delivery pipe leads from each retort to a condenser into which the vapor containing wood alcohol and other substances is conducted. The cord wood, from which the alcohol is made, is carefully stacked in the retort until the chamber is completely filled.* * * Coal is used for fuel to heat the retorts. When sufficient heat is applied destructive distillation of the wood takes place. The gaseous products pass over, most of them condensing in their progress. What is known as the permanent gas, however, passes along and is utilized for fuel beneath boilers or furnaces. * * *

In the course of manufacture the condensed liquid is neutralized with lime, thereby becoming converted into acetate of lime. The acetate of lime is then dried in kilns. They are usually located on the top of retorts so that the radiant heat from the retorts can be utilized for the drying process. The acetate of lime must be spread out by hand shoveling. Employees doing this work are exposed to a temperature ranging from 90° to 100° during the summer. The temperature of the floor upon which the workmen stand is even higher. * * *

Tar is one of the by-products in the manufacture of wood alcohol. The lime and alcohol stills, condensers, mixing tubs, and vats for separating the tar from the liquid are invariably located in the still house. Condensers were found that discharged noncondensed gases into the workroom. These gases are injurious to health and should be carried outside the workroom. * * *

It is very important to prevent large quantities of gas from entering the still house. During winter months, when every aperture is closed in order to keep the still house fairly warm, the escape of gases and vapors from mixing vats and other sources causes amblyopia, or temporary blindness, to workers engaged in these still houses.

The report enumerates a number of industries in which wood alcohol is extensively used particularly as a solvent for gums, dyes, and resins, and as a basic material for the manufacture of various dyes used in the manufacture of leather. It is used in many industries where shellac is used, notably in hat making, dyeing and stiffening of artificial flowers, making picture frames, applying varnish to the interior of beer vats, shellacking knots in boards, varnishing furniture, pianos, pencils, toys, and wooden patterns.

Investigation was made of such industries known to be using wood alcohol, and the physical defects of some of the workers were noted. In some factories it was found that the use of wood alcohol has been lessened and in others its place has been taken largely by denatured alcohol, that is, grain alcohol to which wood alcohol or other substances have been added, but which is in most respects as harmful to health as wood alcohol. In the manufacture of artificial flowers

the physical defects of 20 workers were noted, consisting of dermatitis, or skin inflammation, anemia, nearsightedness, and conjunctivitis, or inflammation of the delicate membrane which lines the lids and covers the eyeball. The history of a number of cases is given.

It is suggested that the present State labor laws are inadequate to meet existing conditions connected with the use of wood alcohol, and the industrial commission proposes the following rules which it believes would practically eliminate the dangers described:

1. In any factory where the amount of wood alcohol exists in the atmosphere to the extent of 1 part per 10,000 volumes of air, means of ventilation shall be provided to remove same as far as possible.

2. All jugs, bottles, cans, barrels or other receptacles in which wood alcohol is stored shall be properly labeled "Wood alcohol—poison." (Skull and crossbones.)

3. In processes where wood alcohol is used by employees, which requires that the hands of the operators come in direct contact with this material, impervious gloves shall be furnished by the proprietors of such factories, who shall see to it that they are kept in good condition.

4. Whenever it is necessary to enter an inclosure, tank, or still in which vapors of wood alcohol are present, a gas helmet or other device shall be provided by the proprietor and worn by the person obliged to enter such inclosure, tank, or still. Fresh air, free from contamination, shall be supplied through a hose within the helmet. All vats, pans, cans, or other receptacles containing wood alcohol shall be provided with tight covers.

5. Whenever wood alcohol is used or manufactured in the process as an incident of the business carried on, a painted sign shall be kept posted in all such workrooms, calling attention to the dangerous nature of wood alcohol. * * *

6. A runboard or walk should be provided in each kiln for the use of employees on which to stand while spreading the acetate of lime being dried, thus enabling them to occasionally step from the highly heated material.

REGULATIONS CONCERNING DANGEROUS OR OBJECTIONABLE ESTABLISHMENTS IN FRANCE.[1]

Factories, workshops, foundries, warehouses, work yards, and all industrial or commercial establishments considered dangerous or objectionable, whether to the safety or salubrity of the neighborhood, to the public health, or to agricultural operations, are subject to the supervision of public authority under the following provisions:

These establishments are divided into three classes, according to the degree of the danger or objectionable features inherent in their operation.

Establishments of the first class must be located outside of populated districts; the second class includes those in which this measure need not be so rigidly enforced, but for which such measures must be taken as will render them safe and unobjectionable; the third class includes all establishments but slightly dangerous or objectionable to

[1] Journal Officiel de la République Française, Dec. 21, 1917, p. 10443. Paris. Law of Dec. 19, 1917.

the neighborhood, or public health, but are subject to the general provisions taken to assure public comfort and health in the neighborhood where located.

Establishments of the first and second classes may begin operation only when, upon the request of the owners or interested persons, the prefect has authorized them to do so. The third class, before opening, shall file a written declaration of intentions with the prefect.

The classification shall be determined by a decree issued under the authority of the State council. The minister of commerce and industry shall determine the regulations and conditions imposed by this law relative to the form of request for authority to begin operations, and relative to information and plans required to be submitted in support of the application. After a request has been submitted in the case of the first and second class establishments, a committee is designated to investigate the nature of the industry proposed, its degree of danger to public health, or its objectionable features, etc. Notice of such proposed investigation is posted in the territory where the establishment is to be located. The investigation is open for one month, at least.

If the operation is authorized the permit shall specify the conditions under which operations shall be conducted and which are deemed necessary for protection of the interests above mentioned. Supplementary orders imposing further measures of safety may be issued.

The plans submitted are examined by the labor inspection service, and if found not to conform to legal provisions and regulations concerning the health and safety of employees the prefect shall arrest the delivery of the permit until such time as satisfactory modifications have been made.

In all permits issued the rights of third parties are reserved, who may enter complaint before municipal authorities (conseil de prefecture), provided they have not renounced their right to do so, or unless they acquired ownership of the lands after the decrees were issued.

When the application is for a new industry, or new processes, or in localities which may be utilized for dwellings, permits may be issued for a limited period only, subject to renewal.

Permits are forfeited unless the establishments begin operation within a specified time.

Establishments of the third class are subject to such general rules and regulations as may be issued or modified from time to time by the prefect of each department. The general rules may be modified to meet the special conditions found in a particular establishment. Establishments of this class in operation before the passage of this

law are not required to apply for permits, but are subject to the general rules and regulations.

The inspection service is under the supervision of the prefect, who acts concurrently with the inspectors of dangerous establishments.

In departments where the number and importance of these establishments require such service, or when two or more departments shall unite to form an inspection district, each department bearing its share of the expense, the prefect may name inspectors.

Every inspector is sworn not to divulge or to use, directly or indirectly, even after the establishment ceases operation, any secret of manufacture or process of operation.

Establishments are open to the inspection service at all hours during operation.

Notice must be filed with the public authorities in case of change in ownership, any additional lines of work classed as dangerous undertaken, transfer to another locality, any change in the condition of lands occupied, extension of operations; and under certain of these changes an application for a new permit is required.

Authorized establishments ceasing operations for at least two consecutive years, establishments in operation at the time of the passage of this law ceasing operation for at least one year, and those destroyed by fire, explosion, or other accident due to its technical process of operation must secure new permits before resuming operations.

INDUSTRIAL ACCIDENTS.

CONFERENCE OF SAFETY ENGINEERS OF UNITED STATES GOVERNMENT ESTABLISHMENTS.

A conference of the safety engineers of the United States navy yards, arsenals, and other Government establishments was held at the Norfolk Navy Yard March 14 and 15, 1918. This was the third of a series of conferences of Government safety engineers called together for the better organization and standardization of methods for accident prevention in Government plants, including not only direct safe-guarding, but also construction, safe practices, and safety education generally.

The appointment of safety engineers in Government establishments, which, within a year, has extended to 20 different plants, is the result of a safety survey of the Government navy yards and arsenals made by the Federal Employees' Compensation Commission soon after its appointment in 1917. The survey was made in order that the commission might have knowledge of the conditions under which the work in Government establishments is carried on, of the hazards of the work, and of the possibilities of accident prevention by the development of methods which have proved so successful in recent years in industrial establishments. The officials in charge of the various establishments cooperated most heartily in the survey. Most of them were fully alive to the practical usefulness of accident-prevention work in an emergency like the present, when avoidable accidents might readily result in the loss of highly skilled men whose services could not be replaced.

The conference was chiefly devoted to the discussion of safety standards to be adopted for immediate use in the Government plants. Standards were adopted covering the following items:

1. Building construction.
2. Power plants and prime movers.
3. Power transmission apparatus.
4. Remote control apparatus.
5. Elevators.
6. Cranes.
7. Fire appliances and equipment.
8. Lighting.
9. Wash, toilet, and locker rooms.
10. Eye protectors.
11. Safety specifications to accompany proposals.
12. Inspection reports.
13. Unsafe practices.
14. Plant rules and regulations.

As a result of the earlier conferences and of the work of committees appointed at those conferences, drafts of tentative standards had been placed before the conference for discussion. Preliminary to the conference, a special committee of three engineers had been assigned the task of reviewing the entire body of tentative rules and standards, in cooperation with members of the staff of the Bureau of Standards and a representative of the United States Bureau of Labor Statistics. As a result, the conference was able to reach an agreement on practically all points with the minimum amount of discussion.

It is planned that the standards worked out in the conference shall be issued by the Bureau of Standards with adequate illustrations to form one of the bureau's series of standard manuals, which began with the publication of its "National Electrical Safety Code." Some of the standards, especially those relating to construction and to safety specifications for new equipment, have already been adopted and put into effect at some of the plants.

In addition to the consideration of standards, the conference also discussed at some length methods of education for accident prevention, organization of safety committees, and the recording and reporting of accidents. Forms were adopted for current records of accidents and for monthly reports.

The conference was attended by safety engineers representing the navy yards, arsenals, and other Government establishments. Representatives of the United States Employees' Compensation Commission, the Bureau of Standards, the Bureau of Labor Statistics, and the Shipping Board were also present. The conference was in charge of Mr. A. H. Young, director of the American Museum of Safety, who has been serving as chief safety adviser to the Employees' Compensation Commission in its efforts to secure the adoption in Government establishments of the most efficient accident prevention methods.

HAZARDS OF BLAST-FURNACE OPERATION.[1]

The United States Bureau of Mines has recently issued a report on the "Occupational hazards at blast-furnace plants and accident prevention," by Frederick H. Willcox, metallurgical engineer of the bureau. The study is based on records of accidents at blast furnaces in Pennsylvania in the year 1915, and was prepared under a cooperative agreement with the Pennsylvania Department of Labor and Industry.

[1] Occupational Hazard at Blast-furnace Plants and Accident Prevention, by Frederick H. Willcox. Bulletin 140, U. S. Bureau of Mines. Washington, 1917, 155 pp.

This report contains the most detailed and careful study yet made of the experience of a highly hazardous department of the iron and steel industry. The author has the advantage of engineering knowledge and of blast-furnace experience and has accordingly discussed his material in a way to afford immediate and practical help to the furnace manager who desires to deal with his safety problems intelligently.

Several sections in the beginning of the report are devoted to the development of the blast-furnace plant. It is there pointed out very clearly that the exigencies of production in themselves forced attention to strength of construction, modification of design, and modified practice, and that these things, while designed to increase production, introduced factors of safety of the utmost importance.

The changed character of blast-furnace labor is noted. There can be no doubt that the inexperienced immigrant has been a factor in high accident rates, but the experience of the blast furnaces as here outlined emphasizes the fact that the presence of the inexperienced man is no excuse for a continuing high accident rate. When the management does its duty with any sort of efficiency by instructing the men in proper methods of work and providing proper tools and apparatus the rates drop at once.

Following the general discussion of the first several sections of the report there is a review of the blast-furnace accidents in Pennsylvania during 1915. The method pursued is to give a descriptive statement regarding a selected group of accidents from a given locality in the plant, and to follow this by comment and suggestion regarding methods of prevention. For example, under the general heading "The furnace front" are subheads such as "Cinder notch," "Tapping hole," etc. Under "Tapping hole" accidents are described such as—

(1) Keeper was loading gun before cast, shoveling in clay while the helper operated the valve. Clay plugged in the bottom of the funnel and keeper put in hand to push clay down. Plunger came back and cut off end of middle finger; or

(2) The casting crew were drilling open the tapping hole when the iron rushed out and splashed up, striking a helper's face and eyelids.

The use of such descriptions makes it possible to point out the specific things which were done or should have been done in view of such an occurrence.

This method of presentation has the great advantage of definiteness of treatment. It has also the weakness that the necessary volume of descriptive statements makes it difficult to discover the information which may be desired in a given case for which it is desired to provide a remedy.

In summarizing his description of blast-furnace accidents, the author notes that "falls, together with railroad equipment and asphyxiation, account for most of the fatal injuries." This remark emphasizes in an interesting manner the results of "engineering revision" whereby the hazard of hot metal, which in earlier days stood out far beyond all others, has been reduced and as a death hazard brought almost to the vanishing point.

Regarding the tabulated data it is to be regretted that it was not possible to determine the amount of employment in the Pennsylvania blast furnaces in 1915 and thus to have been able to compute true accident rates.

In discussing responsibility for accidents the author says "the classification of accidents according to responsibility is unsatisfactory." It might be added that any attempt to present the matter by means of a percentage tabulation is so involved in possible error as to be undesirable. To illustrate, suppose the percentages assigned to the worker and to the employer are steadily decreasing. A necessary correlative of this change will be an increase in the percentage attributable to industrial hazard. It will be an extraordinarily well informed person who will not interpret this increased percentage as representing increasing hazard, when in fact the hazard may be stationary or even growing less. In any fluctuating interrelated group such chances of wrong interpretation will inevitably occur.

The list of safeguards is excellent and its careful study would repay any safety man concerned with blast furnaces. A careful checking up fails to disclose any material omission, while no other published material contains, so far as can be determined, all that is found here. The sections on the relation of prevention work to the employee present a sane and workable program. Especially good is the outline of follow-up work for the guidance of blast-furnace safety committees.

This volume will doubtless become and remain for some time the working manual of the safety man in blast-furnace work.

ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1916.

The third report of the United States Bureau of Mines on accidents at metallurgical works, recently issued as Technical paper 201,[1] shows a reduction in fatal accidents at both smelters and ore-dressing plants, but an increase in the number of nonfatal injuries. This latter is due, it is explained, not so much to an increasing hazard as

[1] Accidents at metallurgical works in the United States during the calendar year 1916. Compiled by Albert H. Fay, U. S. Bureau of Mines, Technical paper 201. Washington, 1918. 18 pp.

to the more complete returns received. One hundred and fifty plants, including copper, lead, zinc, and quicksilver smelters, as well as refineries, made returns; the iron blast furnaces are not included in the report. The total number of men reported employed was 66,194 as compared with 49,891 in 1915, and 43,007 in 1914.

The number of fatalities reported was 33 by ore-dressing plants, 36 by smelters, and 14 by auxiliary works, including shops, yards, etc. The number of nonfatal injuries reported by ore-dressing plants was 3,184, by smelters, 9,656, and by auxiliary works, 2,240. Classified on a 14-day basis, to accord with many of the State workmen's compensation laws, the report makes the following showing:

1. Fatal	83
2. Serious (time lost, more than 14 days):	
(*a*) Permanent disability—	
Total	17
Partial	200
(*b*) Others	3,443
3. Slight (time lost, 1 to 14 days, inclusive)	11,420
Total	15,163

The following table shows the actual number of men employed, the number of 300-day workers, and the fatality and injury rates at metallurgical works in 1914, 1915, and 1916, the three years covered by the reports of the Bureau of Mines on this subject:

SUMMARY OF LABOR AND ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1914, 1915, AND 1916.

Industry and year.	Day's work performed.	Employees.		Killed.			Injured.		
		Actual.	On 300-day basis.	Actual.	Per 1,000 employees.	Per 1,000 300-day workers.	Actual.	Per 1,000 employees.	Per 1,000 300-day workers.
Ore-dressing plants:									
1914	4,567,529	15,128	15,225	23	1.52	1.51	1,434	94.79	94.19
1915	5,732,184	18,564	19,107	30	1.62	1.57	2,095	112.85	109.65
1916 [1]	7,041,083	22,365	23,470	33	1.48	1.41	3,184	142.37	135.66
Smelting plants: [2]									
1914	9,700,769	27,879	32,336	33	1.18	1.02	5,673	203.49	175.44
1915	10,878,486	31,327	36,262	38	1.21	1.05	5,718	182.53	157.69
1916 [1]	14,809,046	43,829	49,363	36	.82	.73	9,656	220.31	195.61

[1] Not including auxiliary works, as shops, yards, etc.
[2] Not including iron and steel.

Tables giving causes of accidents indicate that at the ore-dressing plants machinery was responsible for 33 per cent of all fatalities and 18 per cent of all injuries; that 6 per cent of the fatalities were due to falls of persons, whereas at smelters the fatalities due to this cause represented 25 per cent of the total; and that fatalities due to flying or falling objects represented 11 per cent at smelters and 3 per cent

at ore-dressing plants. It also appears that haulage systems caused 17 per cent of the fatalities at smelting plants and 21 per cent at ore-dressing plants; that 6 per cent of the nonfatal injuries at ore-dressing plants were due to haulage, whereas at smelters 10 per cent were due to this cause; and that at smelting plants burns from hot metal, slag, etc., claimed 11 per cent of the fatalities and 25 per cent of the nonfatal injuries.

ACCIDENTS IN MINES AND QUARRIES IN OHIO, 1916.

Statistics of mines and quarries in Ohio for the year ending December 31, 1916, are presented in a pamphlet recently issued by the division of investigation and statistics (Report No. 31) of the industrial commission.[1] There are five sections, the first dealing with coal mines and showing production, number of employees, days of operation, average wages, total annual wage and salary payments, and accidents; and the other four sections dealing with fire-clay mines, gypsum mines, limestone quarries, and sandstone quarries, the data covering production, number of employees, days of operation, classified weekly wages, total annual wage and salary payments, and hours of labor per week.

Although 108 fatal accidents were reported to the inspector of mines during 1916, the report tabulates only those for which awards were made under the workmen's compensation law, numbering 86. Of this number 8 were for deaths which occurred in 1915. The total amount awarded in these 86 cases for death benefits, medical and hospital, and funeral expenses, was $173,384.96,[2] or an average of $2,016.10 each. Sixty per cent of the fatal accidents were caused be falls of stone, slate, or coal. Ninety-eight accidents resulting in permanent partial disabilities, and 3,462 accidents resulting in temporary disabilities are enumerated, the total expenditures for all fatal and nonfatal accidents aggregating $382,620.96, distributed as follows: For death benefits, $159,669; for compensation, $166,618; for medical and hospital expenses, $44,915;[3] and for funeral expenses, $11,418.96. This, of course, does not take into consideration the time lost on account of these accidents, which the report estimates to be equivalent to the entire time of 2,991 men for one year.

The 98 awards for accidents resulting in permanent partial disabilities represented an expenditure of $50,238.[2] Compensation and

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[1] Ohio Industrial Commission. Department of investigation and statistics. Report No. 31. Statistics of mines and quarries in Ohio, 1916. Columbus, 1918. 84 pp.

[2] Exclusive of medical and hospital expenses paid by firms carrying self insurance under the State plan.

[3] Exclusive of any additional expenditures for medical and hospital attention by employers who carry self insurance under sec. 22 of the workmen's compensation act and who are required to furnish medica and hospital care without cost to the injured person.

medical and hospital bills amounting to $156,690[1] were paid in 2,793 cases of temporary disability lasting more than 7 days, while in 669 cases of temporary disability lasting less than 7 days the total medical and hospital expense was $2,308. Under the law no compensation may be awarded in cases of disability lasting 7 days or less. Of 3,462 temporary disability accidents 80.7 per cent resulted in disabilities of more than one week, and 1,106, or 32 per cent, resulted in disabilities of more than 5 weeks.

The following table gives a summary of all coal-mine accidents for which awards were made by the industrial commission during 1916:

NUMBER AND AMOUNT OF AWARDS AND TONS MINED PER AWARD UNDER THE OHIO WORKMEN'S COMPENSATION LAW DURING THE YEAR 1916.

Result of injury.	Number of awards.	Tons mined per award.[2]	Payments made.[1]	
			Amount.	Average.
Fatal	86	401,472	$173,384.96	$2,016.10
Permanent partial disability	96	352,312	50,238.00	512.63
Temporary disability	3,462	9,973	[3] 158,998.00	45.93
Total	3,646	9,470	382,620.96	104.94

[1] Exclusive of medical and hospital expenses paid by firms carrying self-insurance under the State plan.
[2] Based on a total production of 34,526,552 short tons.
[3] Of this amount, $2,308 was spent for medical and hospital service in 669 cases lasting 7 days or less and therefore not entitled to compensation.

The report makes no mention of accidents in fire-clay mines, gypsum mines, limestone quarries, and sandstone quarries.

BIRTH RATES AND MORTALITY STATISTICS.

VITAL AND SICKNESS STATISTICS FOR GERMANY AND AUSTRIA DURING THE WAR.

GERMANY.

The question of the birth rate and infant mortality in Germany during the War has been treated very thoroughly in three publications by Dr. Rott, senior physician and superintendent of the Auguste-Victoria Home for the combating of infantile mortality.[1] The Soziale Praxis (Dec. 6, 1917) thus summarizes these three publications.

In the first of these publications Dr. Rott proves, with the help of extensive and clear statistical matter, that the increased infantile mortality in town and country during the first year of the War was followed by a considerable decrease in 1915, while at the same time there was a decline in the birth rate. Dr. Rott endeavors by detailed inquiry to ascertain what reasons exist for the variation and decline of infantile mortality, and whether and to what extent the decline of infant mortality is connected with and is attributable to the decline in the birth rate. He comes to the conclusion that the increased mortality in 1914 was to be ascribed to the hot summer, bad economic conditions, and want of employment. On the other hand, the decrease in the number of children born alive seems to have been not without influence on the number of infant deaths. The systematic relief afforded by the imperial maternity and nursing allowance has brought about the decline of the mortality figures.

In the three periods in 1915 which have been compared by Dr. Rott the number of children born alive in 18 towns declined by 31,008, or 23.8 per cent, and this decline was accompanied by a decline of 34.9 per cent in infant mortality. Dr. Rott's views as to the extension of social welfare work in peace time are for the most part met by proposals well known.

In the second publication he pays special attention to the public institutions for the care of infants and young children, and emphasizes the necessity of providing nursing rooms in factories, crêches, and day nurseries, which are becoming more and more necessary, owing to the increase in the number of gainfully engaged women. As a

[1] Geburtenhäufigkeit, Säuglingssterblichkeit und Säuglingsschutz, by Dr. Rott. Berlin, 1917. (An essay on the birth rate, infantile mortality, and the protection of infants during the first two years of the war.)

Frauenarbeit und Kinderschutz. Berlin, 1917. (Women's labor and the protection of children.)

Die Mitwirkung der Krankenkassen bei der Mutter Säuglings- und Kleinkinder-fürsorge. Reprinted from the "Ortskrankenkasse." Dresden, 1917. Vol. 1. (A treatise on the cooperation of the sick funds in the care of mothers, infants, and young children.)

further condition for the public care of infants Dr. Rott advocates registry offices for nurseries and public control by trained persons of day nurseries.

In the third publication he dwells expressly on the future cooperation of the sick funds of the workmen's insurance system in the great aim of improving the national hygiene.

The Kommunale Praxis [1] gives the following figures and other particulars relating to the movement of the population between 1913 and 1916 in Berlin—Friedenau, one of the constituent suburbs of Greater Berlin, which is inhabitated largely by officials, merchants, small shopkeepers, etc. On December 31, 1913, the population numbered 44,869, and on December 31, 1916, it was 44,809, showing a decline during this period of 0.13 per cent. There was a regular decrease from year to year in the number of males, amounting in the end to 693, while the number of households increased by 1,402. There was an excess of births over deaths in 1914 of 280, but in 1915 the deaths were more numerous by 84, and in 1916 by 183. The influence of the War showed itself most strongly in the statistics relating to occupations; thus, the number of officers increased by 15.4 per cent, while that of domestic servants, who were formerly the most numerous class of the population, declined by 23.7 per cent; women largely took the place of men as teachers.

Even more significant as to the influence of the War are the figures for illnesses with a fatal termination. Thus under this heading "Congenital debility" appears in 1913 eighteen times, in 1914 seventeen times, and in 1915 twenty-six times. Deaths due to tuberculosis rose from 16 in 1913 to 21 in 1916. Those due to organic diseases of the heart numbered 14 in 1914, 38 in 1915, and 34 in 1916; while arteriosclerosis was responsible for 29 deaths in 1913, 30 in 1914, 89 in 1915, and 75 in 1916. Old people most readily fall victims to the hardships accompanying war. Nervous troubles also show an increase, which is evidently to be attributed to the War, from 0 in 1913–14 to 7 in 1915, and 8 in 1916. Equally unmistakable is the influence of the War in fatal cases of stomachial and intestinal catarrh (dysentery) and other affections of the stomach and intestines. The number of these rose from 0 to 2 in 1914, 19 in 1915, and 24 in 1916. It is to be noted that the highest figures are recorded not for 1916 but for 1915. The same is the case also with the fatal diseases which developed from violent injuries, which number 253 in 1915 and only 182 in 1916. (These figures do not include all the men from the army who died in the Friedenau military hospital, but only those who were finally reported to the police authorities in Friedenau.) The total number of deaths rose from 307 in 1913 to 318 in 1914 and

[1] Kommunale Praxis. Berlin, Jan. 19, 1918.

583 in 1915, and fell to 495 in 1916. The lower figures for 1916 lead one to the conjecture that by this time the weaker had already been eliminated by a process of natural selection.

The number of births fell from 725 in 1913 to 312 in 1916, or 57 per cent. The number of marriages fell in the same period 36.6 per cent. At the same time infant mortality increased; the per cent of children who died in their first year was 6.2 in 1913, 7.5 in 1914, 9 in 1915, and 9.4 in 1916.

In this connection the following figures, as published by the Handelsblad,[1] relating to the birth and death rates in various large German cities, may be of interest. The statistics are for four weeks, the last half of December, 1917, and the first half of January, 1918:

	Birth rate.	Death rate.
Berlin	9.2	9.5
Hamburg	7.0	18.4
Cologne	13.4	20.7
Leipzig	6.5	15.9
Dresden	7.9	16.4
Frankfort-on-the-Main	8.3	9.7
Düsseldorf	9.4	12.4
Nuremberg	10.4	14.8
Chemnitz	8.1	17.9
Breslau	14.0	22.9
Stettin	12.5	17.2
Hanover	10.8	17.9

The preceding figures show that in all of these 12 cities the death rate greatly exceeded the birth rate. In four of them the excess is over 100 per cent, viz, in Hamburg 163 per cent, in Leipzig 145 per cent, in Chemnitz 121 per cent, and in Dresden 108 per cent.

For the purpose of comparison the rates in some cities of Great Britain and of neutral countries are given below. The British figures are for the week ended January 5, 1918:

	Birth rate.	Death rate.
London	20.4	21.3
Birmingham	24.0	14.4
Liverpool	25.4	20.5
Glasgow	22.3	15.4
Edinburgh	13.2	15.5
Dublin	25.4	18.8
Amsterdam	22.3	15.0
Copenhagen	21.1.	13.3
Christiania	17.4	13.9
Stockholm	19.0	12.1
Berne	19.8	12.0

[1] Handelsblad. Amsterdam, Jan. 30, 1918.

AUSTRIA.

The Neue Freie Presse[1] states that general statistics of births, deaths, and marriages in Austria have not been published since the outbreak of the War, but from an examination of the municipal returns in those Provinces which have not been ravaged by invasion, Prof. H. Rauchberg (Prague) shows that while the death rate remains much the same, the birth rate has so seriously diminished that the number of deaths greatly exceeds the number of births. The figures given for lower Austria and Bohemia are:

NUMBER OF BIRTHS AND DEATHS IN LOWER AUSTRIA AND BOHEMIA, 1913 AND 1916.

	Births.	Deaths.	Difference.
Lower Austria:			
1913	73,103	60,010	−13,093
1916	43,950	66,225	+22,275
Bohemia:			
1913	175,965	127,221	−48,744
1916	87,401	122,276	+34,875

The birth rate has fallen in lower Austria 39 per cent, in Bohemia 49.7 per cent, in Moravia 48.1 per cent. As the fall continued in 1917, the number of births in that year can hardly amount to half the normal. Before the War the excess of births over deaths in Austria was about 300,000 a year; now the position is reversed. "If this goes on, Austria must perish," is the conclusion of Prof. Rauchberg.

The Zeit[2] reports that the number of cases of infectious diseases among the civil population notified in Vienna fell in December, 1917, to 1,475. The mortality during that month was greater than in the first two years of the War. Altogether 3,455 persons died, as compared with 3,267 in November, 1917, and 2,935 in December, 1916.

In a later issue the same daily states[3] that a conference of physicians in West Bohemia met recently to consider a report on famine edema or "war dropsy." The cause of it is a watering of the blood through insufficient nourishment, superinduced by overwork and cold. In the Saxon Erzgebirge, where the daily ration actually contains 1,400 calories per capita, the disease does not occur. In Austria the food cards represent 1,000 calories per capita per day, but these are not always obtainable. In the Bohemian Erzgebirge, up to October, 1917, 25,000 cases of "war dropsy" were noted, of which 1,000 ended fatally. The amount of food must be increased so as to supply 1,200 to 1,400 calories a day. A circular has been issued by the governor of Bohemia directing the raising of the flour ration for persons suffering from "war dropsy" from 500 to 725 grams (1.1 to 1.6 pounds) per week.

[1] Neue Freie Presse. Vienna, Feb. 2, 1918. [2] Die Zeit. Vienna, Feb. 2, 1918. [3] Idem, Feb. 12, 1918.

HOUSING AND WELFARE WORK.

HOUSING AND THE LAND PROBLEM.

BY LEIFUR MAGNUSSON.

The most important problem connected with the housing question is the land problem, namely, how to increase the available supply of building land, and how permanently to keep the price of it within the means of the workingman.

Employers in this country have attempted to solve the problem by moving their establishments from the congested urban centers to outlying rural and semirural districts where land is available at more moderate prices. As evidence of this movement of industry the United States census of manufactures shows from census to census an increasing proportion of the population, the number of establishments, and the number of wage earners outside of the limits of certain metropolitan districts which are in reality single industrial areas. Furthermore, a recent survey of company housing undertaken by this bureau shows that company housing developments are either new town developments or are located in the suburbs of larger cities, indicating the extent to which industrial decentralization underlies company housing. The primary reason pointed out by employers for this movement away from the cities has been a desire for more land as well as cheaper land, emphasized by them in such expressions as "lower taxes, lower rentals, and avoidance of congestion," while community benefits naturally flowing from more land and cheaper land are expressed as a desire for more light and air and quieter surroundings.[1]

GROWTH OF SPECULATIVE PROFITS IN COMPANY TOWNS.

Employers admittedly have not solved the land problem in connection with their housing enterprises by merely migrating from the city to the country districts. The study which the bureau made of company housing shows among other things that there has been only slight attempts on the part of employers as a whole to control the uses to which land may be adapted by careful town planning, that there has been little or no positive action taken to prevent overcrowding, and that no method has been devised either wholly or partly successful in controlling speculation in company towns. Some employers, in fact, have encouraged the element of speculation in offering their houses to the workman. Possibilities of the future

[1] For a similar movement of German industry, see p. 72, above.

growth of the company town are pointed out, "whether you buy to hold for an increase, or to build a home to live in or to rent." The buyer is lured by "$3 cash and $2 per week until paid, no interest, no taxes for three years." [1]

While in general increased land values in company towns have not been reflected in increased rents, such increases in land values have naturally occurred in some company towns. An instance in point is Morgan Park, Duluth, Minn., which has been developed by the United States Steel Corporation. The land was originally virgin land, having only an agricultural value. In 1906 the assessed value of 1,250 acres within the area purchased by the steel corporation was $29,500, or $23.60 per acre, according to the records of the office of the tax assessor of the city of Duluth, Minn. As land is assessed by the city at 40 per cent of its "full and true" value, the value per acre at that time was probably about $59. Of the approximate 190 acres in the town site of Morgan Park, the 141 acres which had been improved by the end of 1916 have been assessed at $720 per acre; and the additional 49 acres improved in 1917 have been assessed at $1,000 per acre. This would make the average assessed value of the actual 189 acres for which the figures apply about $791 per acre, or a "full and true" value of $1,975 per acre at the present time. This is $375,250 for the whole tract of 190 acres comprising the town site. However, it should be stated that thus far much of this value is the result of improvements put in by the Morgan Park Co.

Private investigators have shown quite definitely in two company towns—Gary, Ind., and Lackawanna, N. Y.—which were intensively studied for that purpose the amount of "unearned increments" which have been created in those towns.[2]

In Gary, Ind., the price paid for land per acre averaged about $814. The total and final cost, therefore, of the 9,000 acres bought there by the United States Steel Corporation may roughly be stated at $7,200,000. The area in Gary which was not bought by the corporation was 9,749 acres. A liberal estimate of $75 per acre in 1906 has been placed upon this less desirable land. The total cost of the latter is therefore $731,175. This would make the value of the total land area of Gary approximately $8,000,000 at the time of the purchase by the Steel Corporation in 1906. The value of this land in 1915, as

[1] On the other hand, it is only fair to point out that in the large majority of cases speculation in land has not as yet generally developed in company towns because of the prevailing practice of employers to rent and not to sell land and houses to their workmen. Rents are generally low and have not been increased for a period of years; in fact in some instances it would have been desirable to increase rentals and to improve the surroundings and general maintenance of the property with the increased return.

[2] The studies in question were made by special investigators for the New York committee interested in conserving land values for community purposes. One of these studies has been printed: The Unearned Increment in Gary (Ind.), by Robert Murray Haig. (Pol. Science Quart. N. Y. Columbia University Press, March, 1917.)

ascertained from its assessed valuation, which is about 20 per cent of its actual value, was about $40,020,725. The value of the steel plant yards should be deducted as the steel company can not realize any increase in the value of these. Thus the value of the town site of Gary, Ind., in 1906 was $6,414,455 and its selling value in 1915, $33,455,900, an increase of $27,031,445.

To arrive at the unearned increment, however, certain deductions must necessarily be made for values which have been created or added to the land since 1906. These include (1) expenses of layout and administration by the Gary Land Co., (2) advance payment of taxes on nonrevenue producing property, and (3) local improvements. Interest has not been deducted because the ground rents have been assumed to represent a fair return upon the original outlay; and another factor not considered is the effect of the price level upon the increment. Some of the increase has been due to a decline in the purchasing power of money, the wholesale price index of the Bureau of Labor Statistics[1] standing at 88 in 1906 and 100 in 1915, or an increase of 14 per cent. Considering all these allowances, with the exceptions noted, a deduction of $5,225,713 is made by the investigator from the apparent increase in value of $27,031,445. "The amount of the increment which might have been conserved is thus found to be $21,805,732," an amount which, it is concluded, errs on the whole in the direction of reducing the unearned increment.

At Lackawanna, N. Y., near Buffalo, where the Lackawanna[2] Steel Co. created a new city on vacant land in 1899, the land was worth not over $770,000, but the steel company had to pay $1,407,000 for the 1,438 acres which it purchased. The remaining 2,414 acres (also within the city site) were estimated as worth $1,279,000. The total value then was $2,686,000. If the plant land on which no speculative value can be realized is excluded the value was $1,983,000. Adding assessments for local improvements and other real additions to its value, the total value in 1899 was $2,228,000.

Lackawanna is a city of over 14,000 population and the value of the town site land is now estimated at $9,016,000, leaving a net increment of $6,788,000, which has gone to private owners and speculators.

Thus company controlled towns, no less than all other cities, have suffered from the land speculator who withholds land from the market until such time as an effective demand shall give him the

[1] Bulletin No. 200, p. 13.

[2] A Memorandum to the Steel Corporation: A Plan for the Conservation of Future Increments of Land Values at Ojibway and for Conversion of the Same into Additional Revenues for Community Purposes. For private circulation. The chairman of this committee is Lawson Purdy, head of the department of taxes and assessments, New York City, and its secretary is Richard S. Childs, general manager the Bon Ami Co., New York City. This memorandum has been used by the Bureau of Labor Statistics by special permission.

price he asks; and the population of the company town again faces the problem which it faced within the congested city—namely, how to prevent or minimize the dissipation of land values to private land owners, and how to secure the greatest amount of social return in terms of health and recreation and better community surroundings.

PLANS FOR THE DIVERSION OF LAND VALUES FOR COMMUNITY PURPOSES.

In order to secure the ends in question it is necessary to devise new methods which have not yet been tried out in housing enterprises except to a limited extent. These methods, however, involve no new principles as will be noted from the description of them.

Improved company housing.—Directly, or indirectly through a subsidiary or controlled company, the employer acquires land or uses plant land, and constructs houses for his employees. He has the advantage of securing land in outlying districts at its agricultural value. Control of his labor, stabilizing it, and securing a steady supply of labor, and not speculation are to be the objects sought. There is also the advantage of wholesale operations. The employer may rent or sell his houses. If the employer rents his houses he may keep his rents moderately low or he may charge average prevailing rentals and use his returns to improve his property and secure certain social and community benefits to his employees. If he sells, he may do so at cost, plus interest, and on favorable terms, thereby attracting his employees. He may prevent easy speculation by a system of selling for restricted usages, recognized as cumbersome, however, and difficult of execution. Only by a system of permanent ownership or control, adoption of the principle of limited return, and application of rentals to community purposes will he be able to divert the increases in community values to the benefit of the community.

But company housing has this disadvantage, that it gives no control to, or places no responsibility upon, the members of the community. The bureau in its investigation discovered only one employer who proposed giving the employees a measure of control in the housing undertaking. That employer suggested the placing of a representative of the men on the board of trustees of the fund which the company proposed to provide for the construction and sale of houses to its men. But such representation obviously is not sufficiently far-reaching to effect the objects under discussion here.

Perhaps in the long run the only way in which company development can be successfully made to conserve all land values for the community is by adoption of the method sketched by the committee on new industrial towns, presented as a memorandum to the Steel Corporation and suggested for its guidance in the development of its

new steel town of Ojibway, Canada.[1] The plan is of such interest as to make it seem worth while to present it in detail.

When the time comes for admitting the private builders and opening the lots to acquisition and settlement, the Steel Corporation, it is proposed, should organize the "Ojibway Land Co.," select its first board of directors, turn over to it in convenient installments the title to the land (not including plant land) and all the uncompleted contracts for streets, sewers, etc., and accept in return the land company's serial mortgage bonds, equivalent to the cost of the land and improvements, up to date, plus a small profit, say 3 per cent, inasmuch as the purpose of the steel company is primarily to secure labor and not to make a profit. The land company would then make up its tentative rental price list for the lots and would make the following

ANNOUNCEMENT.

No land will be sold. Title will remain in the land company and be handled as a community investment. When the city is well established, the board of directors of the land company will be selected by popular election.

Any responsible person may select and become the tenant of any lot or lots in Ojibway not previously taken and a rental will be charged proportionate to the value thereof and roughly equivalent to what other persons are known to be willing to pay.

Rentals will be readjustable from time to time like tax valuations, with due consideration of the completion of local improvements, the growth of the neighborhood, the population of the city, etc., with the intent of charging whatever the leaseholds are worth and of securing for the community, as represented by the land company, approximately all the "economic ground rent." The readjustments of rental will be made uniformly and scientifically on a frontage basis, and no leaseholder's rent will be raised or decreased except as part of a general readjustment affecting all the land in the neighborhood the value of which has altered, and applicable impartially to his neighbors as well as to himself.

These ground leases will be for five years on business streets and 15 years on residential streets, the leaseholder, his heirs, or assigns having perpetually the preference in renewals. Buildings on such leaseholds will not "fall in" or become the property of the land company, as is the usual procedure in land leases if the leaseholder declines to renew.

If the leaseholder declines to renew, the land company may allow him to remain in possession upon payment month by month of the newly established ground rental until a new lessee is found who will take over the building and pay its fair market value or a 6 per cent rental thereon, whereupon the leaseholder must vacate.

If the leaseholder declines to renew, and vacates, the land company may offer the land and building together for a five-year (or 15-year) lease at not less than the regular land rent plus 6 per cent of the fair market value of the building (said value being subject to an appropriate annual allowance for depreciation), the owner meanwhile being free to find a tenant at better terms if he can before the land company finds one at the fixed rate. Such a tenant will be pledged to pay the land rent to the land company direct and the building rent direct to the owner. The owner will be free

[1] A Memorandum to the Steel Corporation: A Plan for the Conservation of Future Increments of Land Values at Ojibway and for Conversion of the Same into Additional Revenues for Community Purposes. For private circulation.

to dispossess the tenant for nonpayment of the building rent, and the tenant, although not thereafter occupying the premises, will still be liable to the land company for the land rent until the lease expires. The land company will also be free to dispossess the tenant for nonpayment of land rent and the tenant will still be liable to the owner of the building for the building rent till the lease expires.

While the property is without a leaseholder, the land company will receive no ground rent and the owner no income from, or use of, the building, and they thus become partners in their desire to find a new tenant. The land company also retains the option of purchasing the building of a leaseholder who declines to renew at its market value as impartially determined by a fair jury of three arbitrators, and renting or reselling it.

It will thus be seen that no man who builds in the city can have any hope of profit or fear of loss in the changing of value that the lapse of time may bring to his land. He will pay a rent greater than ordinary taxes, a rent somewhat less, however, than the amount he would otherwise pay in taxes, mortgage interest, and interest on his equity combined. He will not have to raise any principal to invest in land.

He benefits further by the fact that none of his ground rent goes to banks and private capital, but all goes into the land company's treasury to be reexpended for the benefit of himself and his fellow townspeople.

The land company will take no profits and all the income will be used in some way for the benefit of the people living in the land company tract.

The right is reserved of enacting new rules from time to time controlling the use of the land in the interest of the general public welfare and of the protection of the land values.

There remains the vital question of how we can make it safe for a tenant to erect costly permanent buildings. Obviously if the character of a neighborhood changes radically by reason of the growth of the city, a building may become obsolete in that location and an encumbrance, fit only to be torn down to make way for a type of building more suited to the altered demands of the neighborhood.

This difficulty we meet by careful city planning, and building regulation which so diminishes this hazard that there will be less danger of such premature obsolescence of buildings in this city than there is under ordinary conditions elsewhere.

We restrict every street as to the use of the land for stores, factories, or residences, respectively, and as to the height of buildings, percentage of the lot that may be covered, and minimum value of the building that may be erected thereon. Thus the man who builds a home will know positively that no stores or factories can invade his neighborhood, no cheaper houses can come in to spoil his street, no mansions will come in to inflate his rental, no high apartment will be allowed to cut off his light. The man who builds a store can make sure that he is or is not in the path of retail expansion, according to his preferences and ambitions.

Thus we plan to avoid congestion and the scrapping of buildings before their time.

The essential features of this method of procedure are: (1) No sale of land; (2) title by occupancy only through a system of ground leases; (3) periodical adjustment of values of leases to keep pace with demand for favorable sites as population increases; (4) use of all rentals for the maintenance of the property and community improvement; (5) application of the principles of classification of land for special uses and of building restrictions in order to maintain the character of the different sections (business and residence) of the community. All the principles here involved, it is pointed out, are those familiar to real estate operators, except that perhaps of periodi-

cal valuation of leases. This principle, however, is now being suggested in the water-power leasing bill before Congress, and would seem to present no great difficulties of application.

The Massachusetts Homestead Commission in its first annual report of 1914 described methods of housing work which would embody the principles of limited dividend, wholesale operations, and participation by the resident. A special committee was appointed and this committee outlined four methods of procedure, each method embodying one or more of these principles. The two methods proposed by the committee which embody the principles of limited dividend or collective participation by the resident or both may be here described.

Improved housing company.—The limited dividend company, here termed as noted, has been known in this country and elsewhere for a number of years. It has been the practice to limit dividends to 5 per cent and to distribute any surplus for community development after ordinary maintenance and depreciation have been provided against. These companies are organized as ordinary stock companies except in the matter of limiting dividends. Speculative profits are eliminated. Houses are usually rented only; if sold, of course, the speculative element is again introduced. The disadvantages of such companies have usually been that tney have had to buy land already at a high value with small prospects of sufficient rents to leave any over for community development; neither investment nor speculative capital has been forthcoming because of a limitation of dividends; and the residents, unless they were stockholders, have had no voice in the affairs of the company. There has been lacking interest and responsibility on their part.

Copartnership homes company.—This form of organization is an application of the financial features of the English Garden City movement to America. The description of this form of organization as given by the Massachusetts committee [1] is presented in full:

> The object of this company would be to promote the cooperative ownership of homes by a method favorable alike to resident and investor. Suitable land, accessible to the city, would be acquired, and substantial, sanitary, and convenient homes would be built. The district would be planned along advanced garden suburb lines, with restriction of the number of houses per acre and provision for allotments for gardening, community playgrounds, and other social activities. Economies could be effected through wholesale operations and the elimination of speculative profit.
>
> A prospective resident would be approved and would take up at least two shares of common stock. He would pay a reasonable rental and share all surplus profits. Dividends on rent and common stock would be credited in common stock until the value of 20 shares is reached, outside capital being gradually retired. The cost of repairs would be deducted from the twelfth month's rent and the remainder remitted, thus further encouraging care in the use of property. The resident could invest his savings

[1] Massachusetts: First annual report of the Homestead Commission, 1914. Boston, 1914. pp. 23-24.

in the company stock at 5 per cent. Ownership being common, not individual, he is secured from loss if he has to move away.

Capital is provided at a low rate, due to wholesale operations, the security of collective ownership, and the low rate of depreciation resulting from the great incentive to care for the property. Common stock may be drawn upon for arrears or repairs due to neglect.

The directors would ultimately be elected by common stockholders, but preferred stock will be represented until common stock is about one-half paid up. Shares should be 500 common and 1,500 preferred, of $100 each. Common stock should be paid not less than 10 per cent upon allotment and installments of $1 per month per share. Dividends should not exceed 5 per cent. Preferred stock should be paid in full, dividends not to exceed 5 per cent, cumulative. It may be retired at par on a year's notice. First mortgages at 5 per cent will be placed on completed houses up to 60 per cent of their value. A reserve fund would be established after preferred dividends are paid at the rate of 1 per cent per annum until it equals the value of the stock. With 2,000 shares subscribed, 250 houses can be built. The committee should secure options and call a meeting when about one-fifth is subscribed.

The Massachusetts committee points out the following advantages:

To the resident: 1. He gets a home at a rental not higher and probably less than elsewhere, and is encouraged to take care of it by having his twelfth month's rent remitted, less the cost of repairs.

2. He gets a house with a garden and plenty of fresh air, a house well built and sanitary, with some individuality, in which he can take pride. He lives in a neighborhood where all are equally desirous of keeping up the property.

3. He shares in the economies effected through wholesale buying of land and materials, building houses in numbers, efficient management, saving in legal expenses, and the elimination of speculative profit.

4. He can invest his savings in the company at 5 per cent.

5. The unearned increment goes to benefit each resident member, for with increase in values he will get either a dividend on rent or rent below market value.

6. He secures practically all the surplus profits after fixed charges are paid in the form of a dividend on his rent, with credit in common stock until his total holdings equal 20 shares, after which they are paid in cash.

7. He lives in a social atmosphere, with new and vital interests and collective friendships in the community. He has a mutual interest in common recreation facilities—playgrounds, halls, etc.

8. Ownership is common, not individual, thus providing security from the risk of loss if a resident has to leave, as he has no liability beyond the shares he holds, on which he may continue to receive dividends or which he may dispose of [the company agreeing to purchase all shares].

9. Capital is provided at a cheaper rate than by any other sound system, due largely to wholesale operations. Outside capital is gradually retired by savings.

To the investor: 1. The company by collective ownership and responsibility offers an exceptional security.

2. The greater the surplus the less the risk, and it is to the interest of the residents, who receive surplus profits, to take care of the property, thereby lessening depreciation, to find tenants for empty houses, and to pay rent punctually. British and continental experience proves that this individual interest equals in value 1 per cent per annum on the capital.

3. The common stock forms a fund on which the company can draw if necessary for temporary arrears in rent, or repairs due to neglect, thus eliminating such losses from the items charged against preferred stock, which the outside investor holds.

The financial scheme as outlined is as follows:

1. The business of the company shall be carried on by a board of directors, ultimately to be elected by the holders of common stock; but until the common stock is about one-half paid in the holders of preferred stock shall be entitled to an equitable representation (see Memorandum).

2. The authorized capital stock of the company shall be $200,000. The value of each share shall be $100. There shall be 500 shares of common stock and 1,500 shares of preferred stock.

3. Common stock shall be paid for at a rate of not less than 10 per cent upon allotment, and the remainder in installments of not less than $1 per month per share, until fully paid up, and shall be entitled to dividends not to exceed 5 per cent, payable quarterly, after all other obligations of the company are paid. Dividends shall be applied as payments on stock until the equivalent of 20 shares is fully paid up. Not more than 20 shares shall be held by any one person. Shares shall be transferable, subject to approval by the directors of the company.

4. Preferred stock shall be paid in full, not less than 10 per cent at the time of subscription, and 30 per cent each succeeding month thereafter, and shall be entitled to dividends as stated on the certificates, but in no case exceeding 5 per cent cumulative, payable quarterly, out of net earnings. Holdings are not limited and are transferable. Preferred stock may be retired in any part at par on a year's notice by the directors of the company.

5. First mortgages at 5 per cent will be placed by the company as rapidly as houses are completed, covering 60 per cent of the value.

6. After all interest on mortgages, etc., and dividends on preferred stock are paid the company shall establish a reserve fund and shall pay into it at the rate of 1 per cent of the outstanding capital stock per annum, until it equals the value of the stock.

With the total issue of 2,000 shares taken up about 250 houses can be built. As soon as sufficient subscriptions are received options will be secured on suitable estates.

The first annual meeting will be called within one month from the time that $15,000 on stock is paid in and a total of $40,000 subscribed.

The company will make it practicable for a family in moderate circumstances to live in a healthful home and in attractive surroundings at the least cost and to maintain it in part through the use and sale of garden products raised on adjacent land. The undersigning committee should invite subscriptions to common or preferred stock. A form for subscriptions should accompany the prospectus.

The business of the company shall be carried on by a board of five directors, who shall be elected annually at the annual meeting by the holders of common stock, each holder being entitled to one vote, provided, however, that no holder of common stock shall be entitled to a vote until he has fully paid for one share of common stock, or an equivalent value on two or more shares; and provided, further, that if at any annual meeting the total amount paid in on common stock by common stockholders entitled to vote is less than five-thirtieths of the total amount paid in on preferred stock, the holders of preferred stock shall be entitled to elect one of the five directors; if such total is less than four-thirtieths they shall be entitled to elect two directors and if less than three-thirtieths, three directors; if less than two-thirtieths, four directors; and if less than one-thirtieth, all five directors. In such election each holder of preferred stock shall be entitled to one vote for every fully paid share of preferred stock that he holds."

Government control or ownership.—It is quite evident that the Government, municipal, State, or Federal, may either substitute itself for any one of the controlling organs in the above forms of

housing organization or it may superimpose itself over them as a controlling or fostering institution; that is, it may either carry on housing work itself directly, or it may merely assist or direct, lend funds, supervise the controlling agencies and create the necessary rules and regulations to secure any or all of the desired ends in relation to the better housing of the workingman. Finally, the Government itself may merely initiate the housing work and subsequently turn its conduct over to a company or to the community to continue it in the interests of the community.

AGRICULTURAL CAMP HOUSING.

BY LEIFUR MAGNUSSON.

Lack of farm labor and the need of organizing to the best advantage the existing supply for war emergency purposes have emphasized employment conditions on farms, particularly housing conditions. Especially is there great lack of practical information as to methods of housing the labor supply so essential at the harvest seasons. Persons actually in touch with the situation are convinced that much of the trouble in holding labor on large farms and plantations is due to a lack of proper housing for them, while those who have adequately housed their tenants or seasonal labor are convinced of the advantages gained.[1] The California Commission of Immigration and Housing has determined in connection with the riot which occurred on the hop ranch near Wheatland in that State on August 3, 1913, "that probably the most important contributory factor was the poor housing and sanitary accommodations afforded the workers."[2]

Because of the larger individual farms, and because of their scattered location and consequent isolation, the problem of transporting farm labor from place to place and of holding a seasonal labor supply has been aggravated in this country. Furthermore, there has been developed no practice in village or community settlements in relation to agriculture. The rural towns and villages of this country are mainly small trading centers for the active farmers and residence centers for the retired farmers. The villages of this country are not communities of actual farmers and farm laborers who work from the village as a center as is frequently the case in Europe. In the latter case housing is much simplified as compared with the difficulties encountered under present conditions of farming in the United States. It is only in certain localities in the South that the farmer's family lives in the city or town

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[1] Cf. World's Work, New York, vol. 27, Dec., 1913, pp. 230-235.

[2] Advisory pamphlet on camp sanitation and housing, Commission of Immigration and Housing of California [4th rev. ed.], p. 5. San Francisco, 1915.

and maintains its farm as an adjunct to the city or town life.[1] There has, therefore, as a rule been very little coordination or dovetailing of town and rural occupations. Hence, there has been necessary an exceptionally large movement of migratory labor in this country to supply the seasonal demands of agriculture.

Aside, principally, from what has been done by the State of California, through its Commission on Immigration and Housing, and by the Public Health Council of the State of New York, little consideration has been given to the proper care and housing of this seasonal migratory labor. Several States, it may be noted in passing, have made investigations as to labor camp conditions, all of which investigations confirm the existence of deplorable conditions in such camps[2]—lack of sanitation, poor food, or lack of variety in food, frauds in commissary charges, scrip payment of wages, withholding of wages due, and other similar practices. The problem of camp regulation and inspection has been almost wholly neglected.

ESSENTIAL NEEDS OF A LABOR CAMP.

Besides adequate wages and reasonably short hours of labor, the points to be considered in securing proper conditions of labor in labor camps are: (1) Clean and wholesome food served in sanitary mess rooms; (2) decent individual sleeping places; (3) washing, laundry, and bathing facilities; (4) medical aid; and (5) provision for recreation.

Different circumstances will determine how to meet these essential requirements of every properly conducted labor camp. Consideration should be given to the racial type of labor to be employed and housed; to differing climatic conditions; and to the character of the country—i. e., topography—where the camp may happen to be located. Thus, Greek and Italian labor may require different handling from Negro labor. Camp construction in the North will differ essentially from that in the South, and, furthermore, different types of camps may be necessary in the same part of the country for different seasons of the year. The topography of the country may make it practicable to use a portable style of camp house if the character of the work to be done is of such nature. Nearness of villages in the locality may render possible some form of billeting of the labor supplying the villages in the locality where, for instance, the harvesting is being carried on. It may be possible under such circumstances to make use of local transportation facilities to move the labor from the

[1] Holmes, G. K., Movement from city and towns to farms (Year Book of the Department of Agriculture, 1914, p. 273).

[2] Among the States which have made investigations are California, Minnesota, Ohio, New York, Utah, and Wisconsin. A somewhat broad and comprehensive investigation of migratory labor and labor camp conditions was made by P. A. Speek for the Commission on Industrial Relations, 1913–1915. This report is not available, however, in published form.

village to the surrounding country where the harvest work is going on. This is the method of the Y. M. C. A. boys' camps and is described below. Furthermore, there is no reason why it should not be possible for the farmer to make use of old or abandoned buildings, repairing and remodeling them in such a way as to make them quite habitable, as was done by the peach farmers in Nassau County, N. Y., during the season of 1917.[1]

METHODS OF ORGANIZATION.

No problem in organization is present in the housing and caring for the agricultural laborer on the small farm where one or two hands in addition to the family of the owner operate the farm. Under such circumstances the farm help is accommodated as a part of the farm operator's family. Problems of organization arise when a large supply of labor is needed, either continuously, as on the large plantations of the South and Southwest and on the large ranches of the Middle and Far West, or seasonally, as in connection with certain crops in all localities.

The seasonal labor recruited in large groups may be organized in any one of the following ways: (1) Under direction and control of the employer or farm operator who may himself provide the necessary accommodations, and supply the food—in a word, care for and maintain the camp and its necessary adjuncts; (2) contracting out to a lessee who may enter into some form of agreement with the owner benefited to supply all or part of the necessary equipment, and who acts as manager on his own account; (3) philanthropic form of management and operation through a military form of organization; (4) billeting of laborers in villages and use of existing means, or provision of new means, of transportation to the place of work;[2] (5) cooperative organization and care of laborers by the village members themselves acting through some constituted form of organization of their own.

The types of houses or camp accommodations which may be provided under any one of the forms of organization adopted may be of several kinds: (1) Portable camp structures; (2) tents; (3) bunk houses of either permanent or temporary structure; (4) barracks; (5) individual dwelling houses of various kinds; and (6) old or abandoned buildings remodeled in any of these forms. The type of camp accommodations adopted will vary with the circumstances or purposes for which they are desired. Thus, portable camps are most suitable where it is necessary to move a labor gang about from place to place.

[1] Cf. New Jersey State Agricultural College, Extension Bulletin, December, 1917 (vol. 1, No. 18) New Brunswick, N. J.

[2] A radius of 7 or 8 miles may be worked in this fashion by the use of automobile truck transportation. (Convict labor camps for road work, by J. E. Pennybacker. Washington, 1916. U. S. Department of Agriculture, Bulletin No. 414, p. 66.)

Portable camps also have greater durability than tents and offer greater protection from the weather.[1] Tents are adaptable under the same circumstances and also for summer use. Bunk houses in all cases are somewhat permanent and substantial structures.[2] Barracks may be of various kinds, consisting either of long rows, divided into one or two room partitions, or large commodious buildings in which individual sleeping cots instead of bunks in tiers may be placed. Dwelling houses of a permanent character are, of course, the most desirable, but are usually adaptable only where labor is to be permanently employed, as on large tenant farms.

SANITARY STANDARDS FOR LABOR CAMPS.

Sanitary standards for labor camps and similar work places have been worked out by various authorities. Perhaps the most extensively quoted and used are those recommended by the California Commission of Immigration and Housing.[3] The United States Reclamation Service has followed these fairly closely for its construction camps on the reclamation projects.[4] The Public Health Council of the State of New York has elaborated a sanitary code, one chapter of which is devoted to camp sanitation,[5] and recently the divisional committee on village and public sanitation of the National Committee on Welfare Work, which is a subcommittee of the committee on labor of the advisory commission of the Council of National Defense, has outlined certain minimum standards to be followed in the laying out of seasonal labor camps and other industrial housing developments in rural and semirural districts.[6] A member of the staff of the United States Public Health Service has also covered the same field,[7] while the Chief of the Division of Road Economics of the Office of Roads (Department of Agriculture) has made an extensive study of convict-labor camp organization and maintenance.[8]

More recently the State of Ohio has made an investigation and proposed recommendations in relation to labor camps,[9] and Wiscon-

[1] For a discussion of the merits of different types of structure reference is made to J. E. Pennybacker's Convict labor for road work, U. S. Department of Agriculture, Bulletin No. 414, p. 127 et seq.

[2] For a description of a semipermanent, nonportable bunk-house camp, see MONTHLY REVIEW for April, 1918, pp. 7 to 11.

[3] Advisory pamphlet on camp sanitation and housing, Commission of Immigration and Housing of California [4th rev. ed.], San Francisco, 1915. 56 pp.

[4] U. S. Reclamation Service. Sanitary Regulations. (Manual of the Reclamation Service, Washington, 1917, vol. 1, pp. 116–122.)

[5] The sanitary code established by the Public Health Council of the State of New York, Chap. V. (In 36th annual report of the State Department of Health, 1915.)

[6] Report of the Committee on Village and Public Sanitation with Special Reference to Housing. Washington, D. C., 1917. (Unpublished, 54 typewritten folios.)

[7] Camp sanitation, by W. F. Draper. (In U. S. Public Health Service, Miscellaneous Publication No. 17. Prevention of disease and care of the sick. Washington, 1917, pp. 58-63.)

[8] Convict-labor road work, by J. E. Pennybacker. Washington, 1916. 218 pp. (U. S. Department of Agriculture, Bulletin No. 414.)

[9] Preliminary survey of labor camps in Ohio, the Industrial Commission of Ohio. (Bulletin of the Industrial Commission of Ohio, Columbus, 1917, vol. 4, No. 11, 22 pp.)

sin [1] and Pennsylvania provide for the inspection of labor camps. While the rules and regulations drafted by these State departments and other authorities are not made with reference to agricultural labor camps, yet the problems of this latter type of camp do not differ essentially from those of the other type of camps.

The principal requirements of good labor camp construction and sanitation, as based upon the foregoing authorities, have been brought together in the following paragraphs:

Camp location.—The principal essential of camp location is well drained ground and accessibility to a drinkable water supply. Consideration should be given to advantageous exposure to sunlight and prevailing winds.

Camp layout.—Camp buildings, tents, and portable houses should be arranged in rows so that the surroundings may be easily kept clean. Kitchen, mess, and commissary houses should be at some distance—50 to 100 feet—from the sleeping quarters. Stables and corrals should be at least 600 feet from the kitchen and mess house and 500 feet from sleeping quarters. Toilets should be at least 75 feet from sleeping quarters and 200 feet from mess and kitchen quarters; minimum standards of 50 feet are suggested by some authorities. Incinerators for kitchen garbage, if used, should be near the kitchen and mess and 75 feet from sleeping quarters.

Water supply.—A plentiful supply of wholesome water should be provided for drinking, cooking, and bathing purposes. (1) The supply should be free from organic contamination; (2) ground water supplies from wells must be covered at the top to insure against pollution; (3) wells should be located with reference to surface drainage and old wells not properly located condemned and new ones constructed; (4) If only contaminated or even questionable water is available, it should be purified by filtration or boiling; (5) all privy vaults should be at least 200 feet from the water supply and so located that pollution of water is impossible; (6) there should be frequent analysis; (7) if stored, water should be in tightly closed receptacles and drawn off by faucet; (8) use of individual drinking cups should be encouraged.

Sleeping quarters.—Floors should be kept in such repair as to be sanitary, and, if of wood, should be elevated from the ground to permit air circulation underneath. Roofs and sides should be watertight, and windows and doors provided with screens. All windows should be so arranged as to open easily.

The California Commission of Immigration and Housing, the United States Reclamation Service following, recommends 500 cubic feet of air space for each person. Ohio recommends not less than

[1] Labor camps in Wisconsin, Industrial Commission of Wisconsin, Madison, 1914, 48 pp.

400 cubic feet. Not less than 200 cubic feet is proposed for each child under 14 years of age. A floor area of at least 50 square feet per person is recommended. These are the desirable standards unless there exist some permanently open means of ventilation such as a complete open side of a building or tent, open ends, or open top.

Bunks, if used, should preferably be of steel, and no triple tiers should be permitted except under unusually favorable circumstances. There should be 2-foot aisles between bunks, and bunks should be not nearer than 1 foot from the floor.

Kitchen and mess houses.—Here the essential is careful screening and closed communication between the two—kitchen and mess room. Doors leading into the outer air should have screened vestibules. The rooms should be well aired and lighted.

Sanitary disposal of waste.—For disposal of garbage every camp should be provided with galvanized iron (or other metal) water-tight cans, with tightly fitting lids to keep out flies and vermin. These containers should be emptied at least twice a week. Waste receptacles should be provided near the sleeping quarters.

All garbage should be disposed of either by burning, by burying, or by feeding to hogs. It should not be fed to chickens as these will not consume it all. If buried, shallow trenches are preferable to deep pits. Burning, however, is generally the most approved method.

Toilets.—The only kind of privies which may be classed as sanitary are those with either removable receptacles (tonneaux or box privies, pail system, incinerating system, etc.), or stationary receptacles from which the contents are removable. The use of privies built over holes in the ground and repeatedly moved and the pits filled are condemned. All toilets should be thoroughly screened and fly proof and well ventilated. Separate toilets for the sexes should be provided, placed at least 50 feet apart and conspicuously marked. Cleanliness in the care of all toilets is to be insisted upon. Daily use of crude oil, chloride of lime, or dry earth on the surface of the pit is recommended. Paper should be provided in all toilets.

Toilet seats should be provided in the proportion of one to every 10 to 20 persons, and 40 persons in the case of shifting camps.

Bathing facilities.—There should be provision in or near sleeping quarters for bathing, as tubs, shower or shelter built on a stream. There should be one facility for each 20 persons. Showers are most preferable, being cheaper to install and more sanitary. Waste water from baths should be carefully drained away.

Soap and towels should be provided without charge. Roller towels, if used, should be changed frequently; use of individual towels is strongly recommended; paper towels are suitable.

Maintenance and cleanliness.—Open manure piles should be eliminated; and stables and stalls near camps kept thoroughly cleaned.

All floors should be cleaned and swept at least twice a week. Kitchen and mess room should be swept daily. Dry sweeping should be discouraged.

Cuspidors with water should be placed in all living quarters and cleaned daily.

A special separate room attached to the bunk house should be provided for washing and drying clothes.

The washing of the laundry of the laborers in the camps should be directed by the person in charge of the camp, who should hire a wash woman or man to be compensated by each laborer in proportion to the washing done for him.

All persons engaged in preparing and handling food should be medically examined with particular attention as to whether or not they have suffered from typhoid or tuberculosis within recent years, or whether they have some other communicable disease. Any person afflicted with such a disease should be kept away from the kitchen and mess house.

All perishable foods should be protected from putrefaction and insects.

Each large camp should have one or more able-bodied men giving their entire time to the care and maintenance of the camp.

Sick house.—In camps of 50 or more persons a fly-proof and mosquito-proof house should be provided to receive the sick.

Recreation room.—In camps of 50 or more a special room, kept clean and well lighted, with tables and benches, should be provided for recreation—reading and writing facilities and games. The employer or farm operator should provide newspapers and books in this recreation room.

EXAMPLES OF CAMP ORGANIZATION AND CAMP CONSTRUCTION.

The farm cadet camps which were organized to assist in harvesting the crop of the 1917 season may serve as an example of the military form of camp organization. A description of the farm cadet camps on Long Island has been given by the Secretary of the Nassau and Suffolk Counties (L. I.) Y. M. C. A.[1]

Organization.—Each labor camp when filled to capacity consists of 49 cadets, 9 officers, and 2 cooks. Each squad of 7 cadets is under the direction of a squad leader. Directing the 7 squad leaders are an assistant director and a camp director. The camps have been organized on a military basis, each squad leader having the rank of

[1] Rural Manhood, devoted to the country work of the Y. M. C. A. in village, town, or country. New York, International Committee of Y. M. C. A.'s, 1917, vol. 8, No. 7 (September), pp. 288–292.

corporal or sergeant, the director corresponding to the captain of the company, and his assistants having the rank of lieutenant.

In addition to this permanent camp organization a movable labor force has been organized and termed the flying squadron. This consists of one squadron of picked cadets, selected each week from the various camps on the basis of efficiency in farm labor. Each squad has a leader, a director, and a cook. They are equipped with an automobile with a special body to carry the cadets, and a trailer, which is provided with a built-in water tank, ice box, and facilities for carrying tents and the personal equipment of the squadron. The purpose of this squadron is to furnish emergency labor on farms too remote from the permanent camp to permit daily transportation of the cadets. The director of this flying squadron spends a part of his time in any particular district to determine the possible need of a permanent camp in that locality and to obtain information concerning acreage, crops, cattle, etc.

Equipment.—Each camp is equipped with seven 12 by 14-foot wall tents with flies, each one of which provides the quarters for a squad. Each tent has a wooden floor and built-in bunks. The headquarters tent, for office purposes and sleeping quarters for the director, is 14 by 16 feet. Here are kept all records, athletic equipment, library, and telephone. A mess tent 18 by 60 feet provides not only a dining room but an auditorium for lectures and entertainments, a reading room, and the like. Another small tent is provided for sleeping quarters for the cooks. A wood cook shack, 18 by 20 feet, equipped with oil ranges and storage facilities for supplies, is thoroughly screened and offers every necessity for providing wholesome food. An outdoor incinerator which is burned out every day disposes of the garbage. An ice-box, built after the style of a cyclone cellar, holds perishable supplies. The latrines are modeled after the Army plan and are burned out and inspected daily by the camp sanitary officer. Shower baths are provided for the cadets' use. The water supply is carefully analyzed before the camp is located.

Commissary department.—In order to secure an adequate amount of the right kind of food at the minimum cost, a commissary department is established with an experienced man in charge. Daily menus are sent out from the central office to all of the camps. Supplies, so far as possible, are bought at wholesale and distributed to the various camps. In this way it has been possible to supply a menu planned by an expert dietitian at the minimum cost.

METHODS OF THE FARMERS OF NIAGARA COUNTY, N. Y.

During the season of 1917 there developed an extraordinary demand for labor to harvest the peach crop of Niagara County, N. Y.[1] The farmers early held a meeting and agreed upon a wage of $2 per day and board for the peach harvest season. Through their own county agent they procured their labor after notifying him definitely how much labor they needed, and when and for how long they would need it.

The boarding and lodging accommodations were simple. In some cases a shed was fitted out as a bunk and boarding house. Frequently boarding accommodations were provided in a separate tent or another shed. Some of the bunks were fitted out with clean straw on the floor, others with straw ticks, some with cots, still others with beds. (As to the use of straw on the floors, there may be some doubt as to its suitability from a sanitary point of view.)

In one case triple deck beds[2] were made by the farmer himself. These had posts 2 by 3 inches by 8 feet, reaching from floor to ceiling; the beds were 30 inches wide and 6 feet long, with boards 6 inches wide on the sides. Heavy woven wire, such as is used for corn cribs, served as springs, and on this the mattress was placed.

The building in which these beds were provided was 40 feet long and 20 feet wide, and had plenty of windows for ventilation. It accommodated 36 men on the second floor, and the lower floor was used as a mess room and kitchen. It is estimated that such a building could be erected for less than $2,000.[3]

AN ORCHARD CAMP IN MARYLAND.

The Tonoloway Orchard Co., of Hancock, Md., has given the bureau a description of its method of housing and caring for its orchard help. The company has 800 acres in apples, and provides camp quarters for about 150 men, accommodated in two camps. The following description applies to one of the camps, the other being similar in every way.

The camp consists of separate sleeping quarters, one for cold weather and the other for warmer weather. The tents for warm and moderate weather are forty in number. Each tent is occupied by two persons. Each occupant is provided with an army cot and army blanket. The bunk houses for colder weather are three in number, each accommodating 15 to 25 men. These bunk houses are built of frame, one story, 9 feet high, with outside dimensions 12 by 20

[1] Farm labor (New Jersey State Agricultural College. Extension Bulletin, New Brunswick, N. J., December, 1917, vol. I, No. 18.)

[2] Triple deck bunks, however, it may be noted, are not recommended by sanitarians.

[3] Farm labor. Op. cit. p. 31.

feet. The bunks are of 2 by 4 feet pine, have heavy springs in the frame, and have straw ticks.

A rest building, 16 feet wide by 20 feet long, and having a 9-foot ceiling, is provided. The rest building contains a shower bath, two or three tables, and benches. Certain daily papers and magazines are provided.

The mess-room building is 50 feet long by 25 feet wide, with ceiling of the first floor 10 feet high. The room has eight windows. It seats 75 men. The second story of the mess room is occupied by the camp manager and his family, which includes cooks and waitresses.

The kitchen is 16 by 12 feet. Two doors connect the mess room and the kitchen. The kitchen is equipped with hot and cold water connections and a large hotel range for cooking. The kitchen has three large windows.

The camp manager has entire charge of the camp, ordering provisions, the care of sleeping quarters, etc.

THE PORTABLE HOUSES OF THE PENNSYLVANIA RAILROAD CO.

The Pennsylvania Railroad Co., in securing labor to carry out its large construction projects and ordinary railroad track work, has brought several thousand men from the Southern States and installed them in camps at different places in Philadelphia and other points on the system. The company owns at the present time a large variety of bunk houses, consisting of converted freight cars, abandoned houses, and the like. After experimenting with various kinds of accommodations for its seasonal help, the company adopted a portable type of building. These buildings are described by Mr. A. E. Owen, former chairman camp committee, Pennsylvania Railroad.[1]

The buildings are constructed of the ordinary tongued-and-grooved white pine, and built in 10-foot sections. Each building when complete is 20 feet wide, with sloping roofs, and approximately 15 to 16 feet high from the floor to the ridgepole; the floors are built on piers about 18 inches from the ground. The entire exterior of the buildings is covered with a pebble-dash roofing paper. By this method it is a simple matter to increase or decrease the size of a building; it can be stored quite conveniently or may be moved from one location to another without serious difficulty, which gives it adaptability for emergency use.

In order to conform to the fire regulations these buildings are lighted by electricity, and each building is equipped with the proper number of fire extinguishers; screens for windows and doors are also provided.

[1] Bunk houses, boarding houses, and labor camps. (In Housing Problems in America: Proceedings of the Sixth National Conference on Housing, Chicago, Oct. 15, 16, and 17, 1917. New York, National Housing Association, 1917, pp. 102–105.)

A regular standard double-deck bunk is used in these dormitories, and each bunk is supplied with two blankets, pillows, pillowcases, and sheet. The blankets, mattresses, and pillows are frequently aired and sprayed with an approved insecticide, pillowcases and sheets are sent to the laundry, and floors are scrubbed at least twice a week with disinfectant solution and mopped or swept at least once a day. The cuspidors are cleaned daily and a disinfectant solution left in the cuspidors. Wherever it is possible a separate locker, which contains soap and individual towel, is provided for each man.

In each of these buildings stationary washstands are provided, hot and cold water furnished, and, where camps are sufficiently large and drainage available, shower baths are provided.

In the larger camps a separate building is used for a commissary or store. This plan is gradually being carried out in the smaller camps, it being understood that the commissary storerooms are fashioned after the same general construction which is used in the bunk house; the kitchens are equipped practically on the same plan as hotels. Bills of fare have been introduced, with menus of a variety of wholesome food. Good cooks are secured to prepare this food properly, which is served by waiters, and a second helping is permitted.

The camps are being enlarged to include recreation rooms, where the men may gather and pass their time when not out on the tracks. There are various forms of amusements provided, but as yet standard plans have not been drawn up, owing to the various nationalities represented and the different forms of amusements required.

The medical department has also been enlarged to look after the general sanitation of the camps as well as the health of the men.

HOUSING AFTER THE WAR IN SCOTLAND.

The Scotch royal commission on housing, the report of which appeared late in 1917 and was reviewed in the December issue of the MONTHLY REVIEW, declared, among other things, that the State must assume full responsibility for housing after the War. Preferably the State should operate through the local authorities and should place upon them the responsibility of seeing to the provision of buildings.

At that time it was estimated that there would be a shortage after the War exceeding 100,000 houses. A subsequent inquiry carried out by the Local Government Board of Scotland, through the local authorities, confirmed this estimate.

In connection with all housing schemes undertaken by the municipal authorities, a certain amount of loss, small or great, has always

fallen upon the taxpayers; and as building costs are at present 70 to 100 per cent higher than they were in prewar years—and doubtless will remain high for some years to come—the housing problem is considered to be too difficult for either private enterprise or municipal authorities to solve. State assistance being acknowledged as necessary, the Scottish Local Government Board, after consultation with the cabinet and treasury, has made certain proposals for financial assistance to municipalities during the period immediately following the War. The scheme proposed is outlined in a circular issued March 18 of this year by the local government board for Scotland.[1] No new legislation is required to carry out this scheme; it will be carried out under the housing of the working classes act, 1890.

Under the plan in question it is proposed that the municipality shall meet the full cost of the housing scheme out of its own funds by means of a loan. For a period of seven years the State Treasury, it is recommended, shall pay 75 per cent of the estimated annual deficit, which will undoubtedly rise in connection with the construction of these houses. At the end of that period, a valuation of the property is to be made, and the State will then assume responsibility for 75 per cent of any excess in the amount of the outstanding capital charges over and above the value of the property.

Municipalities are to be responsible for the remaining 25 per cent of the loss, if any. In exceptional cases, however, the State will extend its assistance beyond the three-quarters of the estimated losses.

All housing schemes to which the State renders financial assistance must be approved by the Local Government Board, viz: Approval of the site, of the location of the houses, of the cost of the land, of the conditions on which the land is acquired, of the layout of the site, of the plans, specifications and estimates, of the rentals proposed to be charged, and of the estimated annual maintenance expenditure on the scheme.

While there is considerable latitude in regard to the types of houses which local authorities may erect, it is provided that as far as is reasonably possible not more than twelve houses shall be placed on an acre of land, and that each house or dwelling shall have not less than three rooms.

It is a condition of any financial assistance given by the State that the erection of the houses shall be commenced within two months from the date of the approval of the loan by the Local Government Board, and that the houses shall be completed by a specified date,

[1] Provision of housing for working classes after the War. Edinburgh, 1918. 4 pp. (Housing and Town Planning, No. 1, 1918.)

[2] A similar plan is proposed by the Local Government Board of England.

and that such number of houses as the Local Government Board may determine shall be completed within 12 months from the date of the announcement of the beginning of construction.

NEW MINISTRIES OF PUBLIC WELFARE AND PUBLIC HEALTH IN AUSTRIA.

THE MINISTRY FOR PUBLIC WELFARE.

According to the Soziale Praxis,[1] the ministry for public welfare (*Ministerium für Soziale Fürsorge*) recently created in Austria will be divided into five main departments in charge of the following activities:

1. Child and juvenile welfare work.
2. Care of war invalids and of survivors of men fallen in the War.
3. Social insurance.
4. Industrial and protective labor legislation.
5. Housing.

As a general rule, all five departments are to be animated by the idea that "a constant harmonious cooperation of the Government administration with autonomous bodies and with directorates of public welfare institutions, societies, foundations, etc., is to be effected." The main object of the new ministry is to insure the energetic care of the public welfare in general, as well as the improvement of the condition of the working classes and of people of small means.

As guiding principles for the individual departments, the following points of view are worthy of notice:

For the care of children and young persons, other ministries shall, as in the past, be regarded as competent—the newly established ministry of public health for questions of hygiene, the ministry of public worship for education and instruction, the ministry of justice for questions relating to guardianship and criminal jurisdiction; but nevertheless a kind of central office is to be formed within the ministry for public welfare by means of a special children's bureau (*Jugendamt*).

Stress is to be laid on the dual nature of the care of the disabled soldiers and those bereaved by the War, i. e., to the fact that the pensions to which they are entitled must be supplemented by social measures. The question of soldiers' homesteads is to be considered in connection with the general housing problem.

As regards social insurance, the creation of old-age and invalidity insurance after the German pattern is in contemplation and, again following the German pattern, value is attached to the cooperation of

[1] Soziale Praxis und Archiv für Volkswohlfahrt, vol. 27, No. 5. Berlin, Nov. 1, 1917.

sick funds and of the carriers of the forthcoming old-age and invalidity insurance in all efforts for combating epidemics and promoting public hygiene.

In the same way the resources of the social insurance system are to be made available in part for housing work. For alleviating the scarcity of small dwellings after the War the Emperor Francis Joseph I Jubilee Fund, created in 1908, is also to be employed.

The very important problem of industrial and protective labor legislation, which has hitherto been dealt with by the socio-political section of the ministry of commerce, is now to be handed over to the new ministry for public welfare. In addition to the very important problem of protective labor legislation, special attention shall in the future be given to the development of industrial labor legislation and to the establishment of working and wage conditions consonant with the spirit of the age. The new ministry is to take over from the ministry of the interior all problems relating to employment and unemployment and in connection therewith that of the protection of emigrants.

THE MINISTRY OF PUBLIC HEALTH.

According to the Neue Freie Presse,[1] the preliminary work in connection with the creation in Austria of a ministry of public health had progressed to such a point that on November 29, 1917, the actual proposals of the Government were laid before the lower house. They were referred to the committee on constitution, and it was expected that immediately after the Christmas recess they would receive parliamentary indorsement and that the new ministry would come into being about the beginning of spring.

With the establishment of the ministry of public health, which is to be housed in a building in the heart of Vienna, the care of the public health in accordance with wishes entertained for years, and publicly expressed, especially by the medical profession, will be given an independent and responsible position corresponding to its importance both for individuals and the community at large.

In the new ministry all activities which contribute to the public health will be collected and centralized. As its main task the ministry of public health will undertake the administration of all matters concerned with the care of the public health for which hitherto the ministry of the interior has been the competent authority. Moreover, a number of duties will be transferred from other departments to the new ministry.

The sphere of activity of the new ministry will comprise the following matters in particular: Combating infectious diseases and epidemics, especially tuberculosis, venereal diseases, and alcoholism;

[1] Neue Freie Presse. Vienna, Dec. 25, 1917.

cooperation of hygiene with veterinary science in all matters touching the preservation of the health of human beings; the hygiene of towns and communes; of buildings and dwellings; matters connected with watering places and bathing resorts; hygienic conditions of trains and ships; quality of the food supply; vocational and industrial hygiene; first aid; treatment and care of invalids, e. g., in hospitals, nursing homes, lunatic asylums, homes for the fallen; the hygiene of prisons, pharmaceutics and therapeutics; burials; hygienic care of disabled soldiers; matters appertaining to charitable efforts; and statistics as to hygiene.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MARCH 15 TO APRIL 14, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between March 15, 1918, and April 14, 1918, in 91 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 15 TO APR. 14, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, molders, Niles-Bement-Pond Co., Ridgeway, Pa.	37	200	Adjusted.
Strike, machinists, American Engineering Co., Philadelphia.	250	1,000	Pending.
Strike, machinists, Fayette Plumb Tool Co., Wellston, Mo.	.....	.....	Do.
Controversy, Jeanesville Iron Works, Hazleton, Pa.	1,500	.....	Adjusted.
Strike, asbestos pipe coverers, shipyards, Philadelphia.	350	.....	Do.
Controversy, Public Service Corporation and electrical workers, Detroit, Mich.	120	400	Services of commissioner not required at this time.
Controversy, American Shipbuilding Co., Lorain, Ohio.	2,200	.....	Adjusted.
Lockout, roofers, Kenneth W. Jacobs Co., Milwaukee, Wis.	.....	.....	Pending.
Controversy, Chas. Weitz Sons and linemen, Des Moines, Iowa.	.....	.....	Do.
Strike, A. B. Clippingers' Sons, Kansas City, Kans.	60	.....	Adjusted.
Walkout, Crown Cork & Seal Co. and pattern makers, Baltimore, Md.	7	.....	Do.
Controversy, Crown Cork & Seal Co. and unskilled laborers, Baltimore, Md.	700	2,500	Do.
Threatened strike, miners, Lansford, Pa.	7,000	.....	Do.
Strike, bituminous coal miners, United Big Vein Coal Co., Mount Savage, Md.	30	.....	Do.
Controversy, The Otis Steel Casting Co. and molders and coremakers, Cleveland, Ohio.	90	710	Men decided to remain at work. General manager refused Government mediation.
Strike, Brooklyn Eastern District Terminal.	.....	.....	Adjusted.
Controversy, Rochester Bridge Co., Rochester, Ind.	.....	.....	No controversy in existence.
Threatened strike, iron miners, Sloss-Sheffield Iron & Steel Co., Russellville, Ala.	550	1,000	Pending.
Controversy, Metal Products Co. and machinists, die makers, lathe hands, toolmakers, and shaper hands, Cleveland, Ohio.	150	1,600	Adjusted.
Controversy, Wheeling Can Co. and machinists, Wheeling, W. Va.	16	.....	Do.
Controversy, Wheeling Mold & Foundry Co., and machinists, Wheeling, W. Va.		.....	Adjusted befor commissioner's arrival.
Strike, electrical workers, Mackle Construction Co., Atlanta and Fort McPherson, Ga.	7	1,000	Pending.
Strike, garment workers, St. Louis, Mo.	3,100	4,000	Do.
Rice-Stix & Co.			
Ely-Walker Co.			
Elder Manufacturing Co.			
New Era Manufacturing Co.			
Paul E. Wolf Co.			

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 15 TO APR. 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Prest-o-lite Co. and machinists, Indianapolis, Ind.	6	200	Adjusted.
Threatened strike, longshoreman, New York			Pending.
Controversy, Gibson Consolidated Copper Co. near Miami, Ariz.	30	100	Adjusted.
Controversy, Morris Machine Co., Baldwinsville, N. Y.	132	168	Do.
Controversy, Western Union Telegraph Co. and operators, Birmingham, Ala.	6		Pending.
Strike, boiler makers, five firms, Indianapolis, Ind	25	50	Adjusted.
Strike, St. Louis Screw Co., St. Louis, Mo	900	1,100	Pending.
Controversy, Grand Trunk R. R. Co., Portland, Me	2	5,000	Adjusted.
Strike, Atlas Ball Co., Philadelphia, Pa	400	426	Do.
Strike, molders, Hart & Crouse Foundry Co., Utica, N. Y.	130	160	Pending.
Lockout, Hill Creek Coal Co., Richlands, Va			Do.
Controversy, Carter-Seaboard Coal Co., Richlands, Va	85	115	Do.
Controversy, Fort Pitt Bridge Co., Canonsburg, Pa	461	39	Do.
Controversy, Ashland Iron & Mining Co., Ashland, Ky			Mill closed down to investigate cause of off standard of iron; no discord between company and men; men to resume work when called.
Strike, Head Drilling Co., Los Angeles, Cal	120		Adjusted.
Lockout, molders, Hawkeye Foundry Co., Waterloo, Iowa.	79		Pending.
Controversy, Employing Electrotypers' Association and employees, Chicago.	450		Do.
Strike, molders, National Transit Co., Oil City, Pa	92		Adjusted.
Controversy, Santa Barbara Telephone Co., Santa Barbara, Cal.			Adjusted before commissioner's arrival.
Strike, engineers, firemen, and switchmen, Nevada Consolidated Mining Co., Ely, Nev.			Case handled by governor and labor commissioner of Nevada.
Controversy, Bond Machine Co., Wilmington, Del	66	5	Pending.
Strike, gas-house workers, Providence Gas Co., Providence, R. I.	126	300	Men accepted company's offer and returned to work as places were found for them.
Strike, iron workers, Buffalo Dry Dock Co., Buffalo, N. Y.	800	700	Men returned to work pending adjustment of wage scale.
Controversy, General Electric Co., Erie, Pa			Pending.
Controversy, Plains Iron Works and other contract shops, Denver, Colo.	210		Do.
Strike, Globe Stove & Range Co., Kokomo, Ind			Adjusted.
Strike, freight handlers, Philadelphia & Reading R. R. Co., Port Richmond, Philadelphia.	125		Do.
Strike, molders, Whiting Foundry & Equipment Co., Harvey, Ill.	75	200	Unable to adjust.
Strike, mill men, Crucible Steel Co., Harrison, N. J	140	3,000	Adjusted.
Threatened strike, cereal-mill workers, American Hominy Co., Terre Haute, Ind.	26	94	Do.
Controversy, Trenton Smelting & Refining Co., Trenton, N. J.	60	5	Pending.
Strike, metal polishers and job platers, 13 shops, Los Angeles, Cal.	52	8	Do.
Strike, lead burners, DuPont Powder Co., Wilmington, Del.	12		Do.
Strike, Merchants Shipbuilding Corporation and machinists, Bristol, Pa.	90		Do.
Strike, National India Rubber Co., Bristol, R. I	4,500		Adjusted.
Strike, tire builders, Goodyear Tire & Rubber Co., Akron, Ohio.	62		Pending.
Controversy, Lyons-Atlas Co. and machinists, Indianapolis, Ind.	8	392	Adjusted.
Strike, steel workers, Simonds Manufacturing Co., Lockport, N. Y.	58	350	Pending.
Threatened strike, waiters, hotels, Baltimore, Md	200		Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 15 TO APR. 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, carpenters, Pekin, Ill.			Adjusted through Ordnance Division, Washington.
Controversy, Fort Des Moines Base Hospital and linemen, Des Moines, Iowa.	4		Adjusted.
Lockout, carpenters, Memphis, Tenn.	300		Pending.
Controversy, Great Lakes Engineering Co., Ashtabula, Ohio.	200	600	Men continuing at work pending expected increase in wages.
Strike, bottle workers, C. L. Flaccus Glass Co., Tarentum, Pa.	75	350	Pending.
Threatened strike, painters and decorators, Los Angeles, Cal.	1,200	300	Adjusted.
Strike, Mallinckrodt Chemical Co., St. Louis, Mo.			Pending.
Controversy, Pelton & Crane Co. and metal polishers, Detroit, Mich.			Adjusted.
Controversy, stockyards, Wichita, Kans.			Do.
Controversy, Enterprise Tool Co. and machinists, tool makers, helpers, etc., Cleveland, Ohio.	100		Pending.
Strike, building trades on Government work, Norfolk, Va.			Adjusted.
Controversy, Steinle-Turret Machine Co., Madison, Wis.	3	250	Pending.
Controversy, Gisholt Machine Co., Madison, Wis.	1,600		Adjusted.
Controversy, Richards Manufacturing Co. and machinists, Manitowoc, Wis.	2		Pending.
Controversy, Aluminum Goods Co., Manitowoc, Wis.	15		Do.
Controversy, laundry workers, West End Laundry, Lange Laundry, St. Louis, Mo.			Do.
Controversy, electrical workers and contractors, Wheeling, W. Va.	35		Do.
Strike, Kanawha Coal Co., Kanawha Valley, W. Va.	800		Do.
Controversy, garment workers, Chicago, Ill.	3	4,000	Adjusted.
Controversy, S. F. Bowser & Co., Fort Wayne, Ind.	1,500		Do.
Strike, American Print Works, Fall River, Mass.			Pending.
Strike, Arnold Print Works, North Adams, Mass.			Do.
Strike, hod carriers and laborers, New York	10,000		Do.
Strike, building trades, Lorain, Ohio	700	1,000	Plumbers, sheet-metal workers, and electricians signed agreements; bricklayers, carpenters, and painters deadlocked. Commissioner withdrew from case.
Strike, American Car & Foundry Co., Chicago, Ill.	800		Adjusted.
Controversy, pattern makers, Pittsburgh, Pa.			Pending.
Threatened strike, General Electric Co., Pittsfield, Mass.			Adjusted.
Strike, sheet-metal workers, St. Louis Metal Ware Co., St. Louis, Mo.			Pending.
Controversy, Cleveland Worm & Gear Co. and machinists, Cleveland, Ohio.			Adjusted.
Strike, sheet-metal workers, Handlan Buck Railways Supply Co., St. Louis.	75		Pending.
Controversy, Jewish bakers and employers, New York	2,500		Do.
Controversy, George A. Ohle & Co. and machinists and machine shop workers, Newark, N. J.	45	15	Adjusted.
Strike, machinists, tinsmiths, and iron workers, Hospital Supply Co., New York.	120	25	Pending.
Strike, Newborn & Co., New York			Do.
Controversy, Smalley, General Co. and machinists, Bay City, Mich.			Do.
Controversy, American-British Co. and machinists, Providence, R. I.			Do.
Strike, laborers and tin house employees, Standard Tin Plate Co., Canonsburg, Pa.	500		Adjusted.
Controversy, Schwarts Wheel Co., Philadelphia			Pending.
Controversy, Depere Manufacturing Co., Madison, Wis.			Do.
Controversy, Swift & Co., St. Joseph, Mo.			Do.
Lockout, Smith & Drum Co., Philadelphia	60		Adjusted.
Controversy, Mahoning & Shenango Ry. & Light Co., Youngstown, Ohio.			Pending.
Strike, United States Metals Refining Co., Chrome, N. J.			Do.
Strike, American Smelting & Refining Co. and Raritan Copper Co., Perth Amboy, N. J.			Do.
Lockout, sheet-metal workers, United States Aero Propeller Co., Milwaukee, Wis.			Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR,. 15 TO APR. 14, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Norwalk hospital, Norwalk, Cal.			Pending.
Controversy, typographical union, Denver, Colo.			Do.
Strike, track laborers, Philadelphia & Reading R. R. Co., Port Richmond, Philadelphia.	40	(1)	Adjusted.
Threatened strike, freight handlers, Philadelphia & Reading R. R. Co., Broad and Callowhill streets, Philadelphia.	60	135	Do.
Strike, Southern Pacific shops, New York			Pending.
Controversy, S. P. Manufacturing Co., Cleveland, Ohio			Do.
Strike, molders, Menefee Foundry Co., Fort Wayne, Ind.			Adjusted.
Controversy, H. C. Cragg Manufacturing Co., Washington.			Pending.
Controversy, textile workers, Sanford, Me.	1,200		Do.
Controversy, hatters, Danbury, Conn.			Do.
Controversy, building trades and contractors, Marsh Aviation Training School, Alessandro, Cal.	250	500	Adjusted.
Strike, Atlas Brass Foundry Co., Cleveland, Ohio			Pending.
Strike, American Range & Foundry Co., Cleveland, Ohio.			Do.
Threatened strike, dock truckers, Seattle, Wash			Do.
Strike, John Wood plant, Conshohocken, Pa.			Adjusted.
Controversy, structural iron workers on cantonment, Des Moines, Iowa.			Pending.
Strike, carriage, wagon, and automobile workers, Chicago.	800		Do.
Strikes and lockouts, Billings, Mont.			Do.
Sympathetic strike, Waco, Tex.			Do.
Strike, Leslie & Elliott Co., Paterson, N. J.			Do.
Strike, machinists, Marine Repair Shops & Marine Railways, Norfolk, Va.			Do.
Strike, Marshall Foundry Co., Blacklick, Pa.	500		Adjusted.
Strike, molders, Frank Nealon Co. and others, Pittsburgh, Pa.			Pending.
Controversy, stevedores, Norfolk, Va.			Do.
Strike, Plum Tool Co., St. Louis, Mo.			Do.
Strike, garment workers, several shirt factories, St. Louis, Mo.			Do.
Strike, Samuel Cupples Envelope Co., St. Louis, Mo.			Do.
Strike, Ornament, Wire & Iron Co., St. Louis, Mo.			Do.
Strike, Kroger Groceries and Meat Stores, St. Louis, Mo.			Do.
Threatened strike, Hudson and Manhattan Tubes, New York.			Do.
Strike, South Norwalk, Conn.			Do.
Controversy, Merchants & Evans Co. and machinists, Philadelphia.			Do.
Controversy, electrical workers in Central and Northern California and Light & Power and Street Railroad corporations.			Do.
Controversy, Thomas Iron Co., near Wharton, N. J.			Do.
Controversy, sheet-metal workers, Aeroplane Propeller Works, Chicago.			Do.
Controversy, Hartford & New York Transportation Co. and longshoremen, New York.			Do.

[1] Philadelphia division.

The following cases noted as pending in the March 15 statement have been disposed of:

Strike, laundry workers, Kansas City, Mo. Adjusted.

Sympathetic strike of various trades at Kansas City, in which 15,000 were directly involved and 60,000 indirectly involved. Adjusted.

Controversy, Wireless Specialty Co., Boston, Mass. Unable to adjust.

Strike, retail clerks, St. Louis. Adjusted.

Strike, stove mounters, Detroit, Mich.; Michigan Stove Co., Art Stove Co., Peninsular Stove Co., and Detroit Stove Works. Adjusted.

Controversy, Kroeschell Bros. Ice Machine Co. and machinists, Chicago. Adjusted.

Controversy, French Creek Foundry Co., Franklin, Pa. Adjusted.

Controversy, Franklin Foundry Co., Franklin, Pa. Adjusted.

Lockout, flint-glass workers, Empire Cut Glass Co., Flemington, N. J. Adjusted.

Controversy, Mississippi River & Bonne Terre R. R., Bonne Terre, Mo. Adjusted.

Strike, Thurlow Steel Co., Philadelphia. Adjusted.

Controversy, waiters, Washington hotels. Ten adjusted, one pending.

Strike, machinists and pipe fitters, Hercules Powder Co., San Diego, Cal. Adjusted.

Controversy, Los Angeles & Salt Lake R. R. Co., Los Angeles, Cal. Report submitted to Director General of Railroads.

Controversy, Huntington Lumber & Supply Co., Huntington, W. Va. Adjusted.

Strike, silk-mill workers, Allegany County, Md. Questions in dispute submitted to president of company and president of United Textile Workers of America for adjustment.

Strike, sheet-metal workers, The Clothel Co., Bayonne, N. J. Adjusted.

Controversy, machinists, Perth Amboy, N. J. Adjusted.

Lockout, Ross Gear & Tool Co., Lafayette, Ind. Adjusted.

Controversy, The Willys-Overland Co., Toledo, Ohio. Adjusted.

Threatened strike, blacksmiths and helpers, American Car & Foundry Co., Wilmington, Del. Adjusted.

Controversy, Toledo Machine & Tool Co. and machinists, Toledo, Ohio. Adjusted.

Strike, tobacco workers, Liggett & Myers Co., St. Louis, Mo. Adjusted.

Controversy, Standard Gauge & Steel Co., Beaver Falls, Pa. No controversy in existence.

Strike, drug clerks, Denver. Adjusted.

STRIKES AND LOCKOUTS.

STRIKES AND LOCKOUTS IN CANADA, 1901 TO 1916.

In a brief introductory summary, preceding numerous tables which comprise the major portion of a recent report on strikes and lockouts in Canada,[1] it is stated that in the period 1901 to 1916 there were 1,594 strikes involving 9,430 employers, 398,391 employees, and a time loss estimated at 10,920,539 working days. Particular comment is made upon the "comparatively slight industrial disturbance in Canada since the outbreak of the War." It appears that there were only 7 strikes in the period from August 1 to December 31, 1914, less than 300 employees being affected; that in 1915 there were 43 strikes affecting 9,140 employees and causing a time loss of 106,149 days, "the smallest amount of disturbance from the standpoints of number of disputes, time loss, and percentage of the total population involved ever recorded"; that in 1916 the number of disputes increased to 75, that year being third in the record as to minimum of trouble; that in the 1911–1915 period the number of disputes (449) was lower than in either of the two preceding quinquennial periods, the number of employees affected (127,959) being slightly higher than during either of the two preceding five-year periods, while the time loss of 4,969,739 days "was much the heaviest of the three five-year periods."

From the standpoint of number of disputes the report, which deals particularly with the period 1911 to 1915, shows that industrial unrest in that period was greatest in the building, metal and shipbuilding, clothing, and transport trades in the order named, and "it is noteworthy that this order prevailed throughout the three quinquennial periods." The mining industry, however, seems to have been responsible for the greatest amount of time loss—51.7 per cent of the total days. "The mining industry has contributed a constantly increasing share of the country's industrial unrest." Most of the 449 disputes occurring in this five-year period were due to questions of wages and hours, about 70 per cent of the disputes and 63 per cent of the time loss being due to this cause. As to the result of these strikes, 139, or 30 per cent, terminated in favor of employees; 164, or 36 per cent, in favor of employers; 79, or 17 per cent, were compromised; and in 67 cases the result was indefinite. In 196 (43.7 per cent) of the disputes settlement was effected by direct negotiation between the parties or their representatives.

[1] Canada. Department of Labor. Strikes and lockouts in Canada, 1901–1916. Ottawa, 1918. 138 pp.

As to settlement of disputes in the entire period, 1901 to 1915, inclusive, the proportions are substantially the same as indicated for the period 1911 to 1915, namely, 31 per cent in favor of employers, 34 per cent in favor of employees, and 14 per cent compromised.

The following table gives a summary of the data pertaining to industrial disputes occurring in the period 1901 to 1915, inclusive:

SUMMARY OF DATA PERTAINING TO INDUSTRIAL DISPUTES IN CANADA, BY INDUSTRY AND BY QUINQUENNIAL PERIOD, 1901 TO 1915, INCLUSIVE.

Industry and period.	Number of disputes.	Per cent of total disputes in each period.	Number of establishments concerned.	Number of employees affected.	Time loss.	
					Working days.	Per cent of total in each period.
Fishing:						
1901-1905	6	1.0	13	13,300	189,600	7.7
1906-1910	4	.8	5	677	8,488	.3
1911-1915	3	.7	37	2,750	55,000	1.1
Total	13	.9	55	16,727	253,088	2.4
Lumbering:						
1901-1905	13	2.3	13	2,640	9,490	.4
1906-1910	15	2.9	22	2,921	61,587	1.9
1911-1915	7	1.6	35	2,825	141,570	2.8
Total	35	2.3	70	8,386	212,647	2.0
Mining:						
1901-1905	37	6.6	43	27,732	647,172	26.3
1906-1910	50	9.8	106	33,997	1,510,307	46.0
1911-1915	29	6.5	103	26,231	2,570,688	51.7
Total	116	7.6	252	87,960	4,728,167	44.1
Building:						
1901-1905	143	25.6	1,728	22,680	610,586	24.8
1906-1910	123	24.1	2,735	27,319	474,028	14.4
1911-1915	128	28.5	1,655	26,507	557,194	11.2
Total	394	25.9	6,118	76,506	1,641,808	15.3
Metal:						
1901-1905	95	17.0	188	10,580	208,953	8.5
1906-1910	75	14.7	369	8,337	218,961	6.7
1911-1915	103	22.9	298	13,763	237,022	4.8
Total	273	18.0	855	32,680	664,936	6.2
Woodworking:						
1901-1905	33	5.9	82	3,055	60,813	2.5
1906-1910	14	2.7	39	1,303	14,472	.4
1911-1915	6	1.3	50	690	31,377	.6
Total	53	3.5	171	5,048	106,662	1.0
Printing and publishing:						
1901-1905	18	3.2	84	1,100	9,590	.4
1906-1910	10	2.0	31	316	4,119	.1
1911-1915	4	.9	42	329	4,605	.1
Total	32	2.1	157	1,745	18,314	.2
Textiles:						
1901-1905	15	2.7	14	4,456	42,751	1.7
1906-1910	21	4.1	24	14,436	236,783	7.2
1911-1915	9	2.0	9	2,478	27,090	.5
Total	45	3.0	47	21,370	306,624	2.9

SUMMARY OF DATA PERTAINING TO INDUSTRIAL DISPUTES IN CANADA, BY INDUSTRY AND BY QUINQUENNIAL PERIOD, 1901 TO 1915, INCLUSIVE—Concluded.

Industry and period.	Number of disputes.	Per cent of total disputes in each period.	Number of establishments concerned.	Number of employees affected.	Time loss.	
					Working days.	Per cent of total in each period.
Clothing:						
1901–1905	51	9.1	200	8,968	196,797	8.0
1906–1910	56	11.0	106	6,076	105,531	3.2
1911–1915	51	11.4	156	21,454	587,739	11.8
Total	158	10.4	462	36,498	890,067	8.4
Food, liquors, and tobacco:						
1901–1905	41	7.3	94	2,153	16,201	.7
1906–1910	21	4.1	73	1,160	15,761	.5
1911–1915	15	3.3	55	1,176	31,722	.6
Total	77	5.1	222	4,489	63,684	.6
Leather:						
1901–1905	9	1.6	14	324	3,596	.1
1906–1910	11	2.2	34	548	13,434	.4
1911–1915	3	.7	4	80	2,570	.1
Total	23	1.5	52	952	19,600	.2
General transport:						
1901–1905	43	7.7	83	18,970	411,778	16.7
1906–1910	54	10.6	112	21,622	573,396	17.5
1911–1915	39	8.7	145	12,553	212,139	4.3
Total	136	9.0	340	53,145	1,197,313	11.2
Miscellaneous:						
1901–1905	22	3.9	45	3,296	36,053	1.5
1906–1910	17	3.3	49	1,477	24,255	.7
1911–1915	32	7.1	158	2,019	35,073	.7
Total	71	4.7	252	6,792	95,381	.9
Unskilled labor:						
1901–1905	33	5.9	31	3,842	18,619	.8
1906–1910	40	7.8	42	5,990	19,402	.6
1911–1915	20	4.5	33	15,104	475,950	9.6
Total	93	6.1	106	24,936	513,971	4.8
Grand total	1,519	100.0	9,159	377,234	10,712,262	100.0
All industries:						
1901–1905	559	[1] 36.8	2,632	123,096	2,461,999	[1] 23.0
1906–1910	511	[1] 33.6	3,747	126,179	3,280,524	[1] 31.6
1911–1915	449	[1] 29.6	2,780	127,959	4,969,739	[1] 46.4
Total	1,519	100.0	9,159	377,234	10,712,262	100.0

[1] Based on total for 15-year period.

IMMIGRATION.

IMMIGRATION IN JANUARY, 1918.

The number of immigrant aliens admitted into the United States during the year 1917 was 152,960, as compared with 355,767 for the year 1916, a decrease of 202,807, or 56.9 per cent. During 1917 the decrease from the preceding month for January, February, and March was 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted showed an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May showed a decrease of 48.9 per cent. The figures for June indicated an increase of 5.5 per cent over those for May. During July only 9,367 immigrant aliens were admitted. As compared with the figures for July, those for August showed an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August, the figures for September showed a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. The admissions in November numbered only 6,446, a decrease of 30.6 per cent from the number admitted in October. In December there was an increase of 8.4 per cent. In January, 1918, there was a decrease of 9 per cent as compared with December, 1917.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	1918	
						Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	6,356	[1] 9.0
February	59,156	46,873	13,873	24,740	19,238	.....	.....
March	96,958	92,621	19,263	27,586	15,512	.....	.....
April	136,371	119,885	24,532	30,560	20,523	.....	.....
May	137,262	107,796	26,069	31,021	10,487	.....	.....
June	176,261	71,728	22,598	30,764	11,095	.....	.....
July	138,244	60,377	21,504	25,035	9,367	.....	.....
August	126,180	37,706	21,949	29,975	10,047	.....	.....
September	136,247	29,143	24,513	36,398	9,228	.....	.....
October	134,440	30,416	25,450	37,056	9,285	.....	.....
November	104,671	26,298	24,545	34,437	6,446	.....	.....
December	95,387	20,944	18,901	30,902	6,987	.....	.....

[1] Decrease.

Classified by races or nationality, the number of immigrant aliens admitted into the United States during specified periods and in January, 1918, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN JANUARY, 1918 BY RACE OR NATIONALITY.[1]

Race or nationality.	Year ending June 30—			July, 1917, to January, 1918.	January, 1918.
	1915	1916	1917		
African (black)	5,660	4,576	7,971	3,755	187
Armenian	932	964	1,221	179	28
Bohemian and Moravian	1,651	642	327	50	3
Bulgarian, Serbian, Montenegrin	3,506	3,146	1,134	75	7
Chinese	2,469	2,239	1,843	1,165	119
Croatian and Slovenian	1,942	791	305	20	.....
Cuban	3,402	3,442	3,428	835	29
Dalmatian, Bosnian, Herzegovinian	305	114	94	10	.....
Dutch and Flemish	6,675	6,443	5,393	998	144
East Indian	82	80	69	41	5
English	38,662	36,168	32,246	6,961	979
Finnish	3,472	5,649	5,900	1,346	83
French	12,636	19,518	24,405	3,874	418
German	20,729	11,555	9,682	1,289	223
Greek	15,187	26,792	25,919	1,939	156
Hebrew	26,497	15,108	17,342	2,579	405
Irish	23,503	20,636	17,462	2,592	350
Italian (north)	10,660	4,905	3,796	628	62
Italian (south)	46,557	33,909	35,154	3,648	428
Japanese	8,609	8,711	8,925	6,008	1,112
Korean	146	154	194	140	15
Lithuanian	2,638	599	479	69	4
Magyar	3,604	981	434	16	.....
Mexican	10,993	17,198	16,438	1,668	28
Pacific Islander	6	5	10	7	1
Polish	9,065	4,502	3,109	386	72
Portuguese	4,376	12,208	10,194	1,570	32
Roumanian	1,200	953	522	117	17
Russian	4,459	4,858	3,711	815	101
Ruthenian (Russniak)	2,933	1,365	1,211	30	3
Scandinavian	24,263	19,172	19,596	5,763	388
Scotch	14,310	13,515	13,350	2,840	353
Slovak	2,069	577	244	24	1
Spanish	5,705	9,259	15,019	4,171	447
Spanish-American	1,667	1,881	2,587	1,255	74
Syrian	1,767	676	976	126	15
Turkish	273	216	454	16	2
Welsh	1,390	983	793	149	30
West Indian (except Cuban)	823	948	1,369	393	19
Other peoples	1,877	3,388	2,097	168	16
Total	326,700	298,826	295,403	57,715	6,356

[1] The total number of departures of emigrant aliens in January, 1918, was 6,661.

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

MASSACHUSETTS.—*Bureau of Statistics. Labor division. Fortieth quarterly report on employment in Massachusetts, quarter ending December 31, 1917. Boston, 1918. 16 pp.*

This report is noted on pages 215 to 217 of this issue of the MONTHLY REVIEW.

—— —— *Public document No. 36. Thirty-first annual report on the statistics of manufactures for the year 1916. Boston, 1918. 131 pp.*

Establishments covered number 9,829. By industry the greatest increase in wages paid and in the number of wage earners was in the manufacture of foundry and machine-shop products, namely, 58 per cent and 43.9 per cent, respectively.

The average number of wage earners employed each month is given as 682,621 (an increase of 14.5 per cent over 1915), the number registered on December 16, 1916, being 719,198, or approximately 10 per cent increase over the corresponding date in 1915. Classified weekly wages were obtained for 771,205 wage earners, and the following table indicates the general upward trend of wages in 1916 as compared with 1915:

PER CENT OF WAGE EARNERS IN EACH SPECIFIED WAGE GROUP, 1916 AS COMPARED WITH 1915.

Item.	1915				1916			
	Number.	Per cent receiving—			Number.	Per cent receiving—		
		Under $8.	$8 to $15.	$15 and over.		Under $8.	$8 to $15.	$15 and over.
Adult males	465,655	6.4	54.7	38.9	514,202	2.0	46.7	51.3
Adult females	190,077	34.5	61.0	4.5	203,136	19.2	72.7	8.1
Young persons under 18	47,471	79.3	20.4	.3	53,867	59.7	39.6	.7

—— *Homestead Commission. Proceedings of the fifth annual city and town planning conference of Massachusetts planning boards. Bulletin No. 8, November, 1917. [Boston.] 86 pp.*

The principal topics considered at this conference were: City and town planning urgent in war time; districting or zoning for height, size, etc.; assessments of betterments; establishing building lines; adopting building codes; excess condemnation.

MICHIGAN.—*The housing code of Michigan. Act No. 167, Public Acts of 1917. [Lansing, 1917.] 31 pp.*

NEW YORK.—*Department of Labor. Division of industrial hygiene. Dangers in the manufacture and industrial uses of wood alcohol. Special bulletin issued under the direction of the industrial commission. No. 86, December, 1917. [Albany, 1917.] 17 pp. Illustrated.*

This bulletin is noted on pages 252 to 254 of this issue of the MONTHLY REVIEW.

OHIO.—*Industrial Commission. Department of investigation and statistics. Report No. 31. Statistics of mines and quarries in Ohio, 1916. Columbus, 1918. 84 pp.*

According to this report, the production of coal in 1916 (34,526,552 short tons) was 52.6 per cent greater than in 1915, and 21.2 per cent greater than the average produc-

tion for the preceding five-year period. The number of workers reported as engaged in mining in 1916 was 41,632 (not including 245 engaged in stripping coal), of whom 3,511 were employed in pick mines and 38,121 were employed in machine mines. Pick miners worked an average of 182 days each, and the loaders in machine mines averaged 197 days each, the average for each being somewhat greater than in 1915. The average production per pick miner in 1916 was 659 tons as compared with 591 tons in 1915, and the average per loader (including drillers and shooters) increased from 841 tons in 1915 to 1,359 tons in 1916. The average daily wages paid to miners ranged from $1.38 paid to 728 trappers, to $4.42 paid to 3,161 machine runners and helpers. The average wages of 23,266 loaders (including drillers and shooters) was $3.26 per day. The report gives the total wage and salary payment for the 789 mines reporting on this point for the year 1916 as $27,810,534, of which $27,478,784, or 98.9 per cent, was paid to wage earners.

Statistics on accidents are noted in a special article on pages 262 and 263 of this issue of the MONTHLY REVIEW.

RHODE ISLAND.—*Twenty-third annual report of the factory inspector, made to the general assembly at its January session, 1917. Greenfield, T. Morey & Son [1917].*

Covers the year ending December 31, 1916, during which 7,027 inspections were made of factories employing 182,793 persons, of whom 6,839 were children under 16 years of age. There are 2,823 accidents noted, 26 being fatal. Four of the fatal and 940 of the nonfatal accidents were caused by machinery in establishments coming under the supervision of the factory inspector. Of these 944 accidents, 564, or 59.7 per cent, resulted in cut, bruised, or jammed fingers. The report includes the names of establishments, by towns, showing the nature of the business, the number employed, and the sanitary conditions in each case.

WASHINGTON.—*Industrial Insurance Department. Sixth annual report for the 12 months ending Sept. 30, 1917. The Workmen's Compensation Act. Olympia, 1918. 77 pp.*

That portion of this report giving the operation of the State's new medical system is noted on pages 230 to 233 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Department of the Interior. Bureau of Mines. Accidents at metallurgical works in the United States during the calendar year 1916. Compiled by Albert H. Fay. Technical paper 201. Washington, 1918. 18 pp.*

This report is noted on pages 260 to 262 of this issue of the MONTHLY REVIEW.

—— —— *Bureau of Mines. Bulletin 140. Occupational hazard at blast-furnace plants and accident prevention, based on records of accidents at blast furnaces in Pennsylvania in 1915. By Frederick H. Willcox. Washington, 1917. 155 pp. Illustrated.*

See pages 258 to 260 of this issue of the MONTHLY REVIEW for an extended digest of this report.

—— *Department of Labor. Bureau of Industrial Housing and Transportation. Standards recommended for permanent industrial housing developments, March, 1918. Washington, 1918. 15 pp.*

These standards for permanent buildings to be constructed for the housing of industrial war workers were adopted by the bureau in consultation with a group of housing experts and others interested in housing. The standards relate to the arrangement and construction of the different types of houses which may be erected for war workers. The different types of houses considered as acceptable are the following: (1) Single-family house; (2) two-family house (i. e., two-flat and not the semidetached house, which latter is termed a single-family house, semidetached); (3) single-family house with rooms for lodgers or boarders; (4) lodging house for men; (5) hotel for men; (6) lodging house for women; (7) hotel for women; (8) tenement house; (9) boarding house.

"These standards are not intended as inflexible requirements, but any plans which fail to conform to them are not likely to be accepted unless supported by very strong reasons. Local building codes, housing laws, and similar ordinances are to be followed except where they permit of lower standards than herein set forth."

UNITED STATES.—*Department of Labor. Bureau of Immigration. United States Immigration Service Bulletin, published monthly under direction of the Commissioner General of Immigration. Washington, 1918. Vol. 1, No. 1.*

Replaces former monthly statistical bulletin. Contains immigration statistics, decisions affecting the enforcement of the immigration and Chinese-exclusion laws and personal notes of the service.

—— *Public Health Service. Industrial efficiency: the bearings of physiological science thereon: a review of recent work. By Frederic S. Lee, Ph. D. Reprint No. 448 from the Public Health Reports, Jan. 11, 1918 (pp. 29–35). Washington, 1918. 7 pp.*

—— —— *Mitigation of the heat hazard in industries, by J. A. Watkins. Reprint No. 441 from the Public Health Reports, Dec. 14, 1917 (pp. 2111–2121). Washington, 1918. 10 pp.*

A statement of the subtopics indicates the scope of this paper, which was read before the Section on Industrial Hygiene of the American Public Health Association, Washington, D. C., October 19, 1917: Physiological considerations, including heat production, heat loss, and effects of high temperature and humidity on the body; symptoms produced by exposure to heat, including acute symptoms, chronic symptoms, and effect of radiant heat; mitigation of heat hazard, including removal of source of heat, protection of workers, to increase rate of heat loss, relation of humidity to heat loss, air motion, water drinking, bathing, reduction of the amount of heat produced by the body, and influence of diet.

—— —— *Morbidity statistics of war industries needed. By B. S. Warren and Edgar Sydenstricker. Reprint No. 452 from the Public Health Reports, February 1, 1918 (pp. 127–132). Washington, 1918. 6 pp.*

Since "morbidity statistics, as an index of a population's health, are regarded without question as one of the most needed instruments and one of the most desired goals of preventive medicine," and "efficiency in the prevention of diseases among industrial workers was never more clearly indispensable than now," the authors of this pamphlet make a strong plea for "a dependable current index of the health of the workers, such as a properly administered system of morbidity statistics will afford." The minimum requirements for useful statistics of morbidity, it is suggested, should be (1) exposure, in years or in months, of the workers who should be classifiable according to sex, age, and occupation; and (2) cases of sickness (at least those causing disability), including (*a*) sex, age, and occupation of persons affected, and (*b*) cause of sickness with time of onset, length of disability, and nature of termination. A number of reasons are given why it would be practicable to secure statistics measuring up to these requirements.

—— —— *The lighting of industrial establishments. The need for supervision, with a suggested system of maintenance rating for artificial lighting equipment. By Davis H. Tuck. Reprint No. 429 from the Public Health Reports, October 19, 1917 (pp. 1761–1764). Washington, 1917. 3 pp.*

Shows how to measure efficiency of maintenance of an establishment's artificial lighting equipment, and emphasizes the desirability of keeping all lighting units clean and in good repair. "By adopting such practices a large economic waste could be avoided and losses due to decreased production, inferior products, accidents, and defective eyesight minimized."

OFFICIAL—FOREIGN COUNTRIES.

ARGENTINA.—*Camara de Diputados de la Nación. Proyecto de Código de Seguro Nacional con Exposicion de Motivos y Proyecto de Ley Basica. Buenos Aires, 1917. 539 pp.*

This volume contains the text of a proposed law authorizing a commission to prepare a code of national insurance, including maternity, sickness, old-age, unemployment, widows' and orphans', and accident insurance, and the report of a committee to which the proposed law was referred. One chapter is devoted to a discussion of the present stage of development of mutual aid associations. These have attained considerable importance, especially among Italian and French residents. According to data collected by the census of 1914, there were 1,203 associations for mutual aid or insurance, having a registered membership of 507,637. Of these members but 65,188 were citizens of Argentina. An extended discussion of the situation relative to social insurance is found under the title "Our popular system of social insurance" (Nuestra Previsión Popular).

AUSTRALIA.—*Bureau of Census and Statistics. Official yearbook, containing authoritative statistics for the period 1901–1916, and corrected statistics for the period 1788 to 1900. No. 10–1917. Melbourne, 1917. xl, 1198 pp.*

——[*Department of the Treasury.*] *War pensions. Statement for the 12 months ended June 30, 1917. Melbourne, January 22, 1918. 4 pp.*

Shows a total of 41,348 pensions claimed during the year ending June 30, 1917, with 45,191 pensions current at that date. Of this latter number, 15,916 were payable to incapacitated members of the forces, and 29,275 to dependents. The total expenditure for pensions was £1,212,631 17s. 6d. ($5,901,273), not counting the expenditure in New Zealand, which is not reported. The average fortnightly rate of war pensions at the date mentioned was approximately £1 9s. 4d. ($7.14) for all pensions.

CANADA.—*Department of Labor. Strikes and lockouts in Canada, 1901–1916. Ottawa, 1918. 138 pp.*

This report is noted on pages 297 to 299 of this issue of the MONTHLY REVIEW.

CANADA (NOVA SCOTIA).—*Workmen's Compensation Board. Report, 1917. Halifax, 1918. 15 pp.*

This report is noted on pages 233 to 235 of this issue of the MONTHLY REVIEW.

DENMARK.—*Danmarks statistik. Statistik aarbog, 1917. Utgivet af det statistiske departement. Copenhagen, 1917. 256 pp.*

Statistics of trade-unions taken from this report are presented on pages 223 and 224 of this issue of the MONTHLY REVIEW.

FRANCE.—[*Assemblée. Sénat. Commission de l'armée.*] *Rapport fait au nom de la Commission de l'armée, chargée d'examiner la proposition de loi, adoptée par la Chambre des Députés, tendant à l'obligation de la rééducation professionnelle des blessés et des mutilés de la guerre appelés à bénéficier de la loi sur les pensions militaires, by Paul Strauss, Sénateur. Paris, 1916. 78 pp. (No. 261. Sénat. Année 1916. Session ordinaire. Annex au procès-verbal de la séance du 4 juillet, 1916.)*

This report discusses steps taken in 1914, 1915, and 1916 for founding and promoting schools of vocational reeducation for the disabled in the War, and gives an outline of their systems of organization as well as a list of the reeducation centers, including the number of men which can be accommodated and the general courses of training offered in each. It urges agricultural reeducation as a national necessity, and describes the work of the military health service and the employment service of the Ministry of War in relation to disabled soldiers. One chapter is devoted to an account of the creation of the National Office of Disabled and Retired Soldiers, with its three branches and their various functions. Special training of the blind and deaf and the employment of the disabled are also considered. The report closes with a comparison of the text of the bill as passed by the Chamber of Deputies with

that proposed by the Commission of the Senate, with comment upon the changes made.

FRANCE.—*Bureau d'études de l'information diplomatique. L'effort économique de la France pendant deux ans et demi de guerre. Paris, Berger-Levrault, 1917. 142 pp.*

These studies, illustrated by statistical tables, deal with several phases of French economic effort during the first two and one-half years of the War. In the first study the general financial situation at the outbreak of hostilities is discussed and the measures taken to meet the great and sudden demands upon the treasury are enumerated. Through private and official initiative, France has been able not only to solve the agricultural problems of lack of labor and need of increased food production, but also to increase her equipment and to prepare for the future. The part of the French railways in the transportation of troops and war material, of merchandise and of food for the civil population constitutes the third study, while organized relief for refugees in France, including an account of the principles governing the administration of this assistance and the employment of the refugees forms the fourth. The fifth and last study, the industrial effort of France during the War, considers the effect of the War upon the general industrial situation, including labor, unemployment, and production.

GREAT BRITAIN.—*Home Office and Board of Trade. Collection of pamphlets on the substitution of women in industry for enlisted men. Pamphlets Nos. 1 to 27. [London, 1917.]*

The following trades are dealt with in these pamphlets: China and earthenware; pottery (coarse ware) and brick; india-rubber works; color, paint, and varnish; wool industry; paper making; cotton; hosiery manufacturing and finishing trade; woodworking; leather tanning and currying; soap and candle; glove; heavy clothing; tobacco manufacture; flour milling; boot and shoe manufacture; chemical industries; sugar refineries; silver and electroplate; oilseed and feeding-cake industry; glass bottle and flint glass; gas works; leather (case and fancy leather); municipal services; light clothing; brush; printing, bleaching, and dyeing (cotton).

—— *[Local Government Board.] Seventy-ninth annual report of the registrar general of births, deaths, and marriages in England and Wales. (1916.) London, 1918, xcii, 492 pp. Price, 5s. net.*

—— *Manuals of emergency legislation. Defense of the Realm Regulations, consolidated and revised to January 31, 1918. Edited by Alexander Pulling, C. B. London, 1918. xi, 88 pp. Price, 6d. net.*

—— *Ministry of Pensions. The first home of recovery for our nerve-shattered sailors and soldiers. A description of the work that is being done at Golders Green, London, NW 4. [London, 1917.] 14 pp. Illustrated.*

This pamphlet tells how discharged sailors and soldiers suffering from chronic nervous troubles caused by war strain are restored to health and to efficiency in a home established by the Government, in cooperation with the British Red Cross Society, as the first model institution of its kind.

—— —— *Instructions and notes on the treatment and training of disabled men. London, 1917. 63 pp. Price, 3d. net.*

—— *Ministry of Reconstruction. A list of commissions and committees set up to deal with questions which will arise at the close of the War. London, 1918. 34 pp. Price, 4d. net.*

These commissions are presented under 15 groupings, as follows: Trade development; finance; raw materials; coal and power; intelligence; scientific and industrial research; demobilization and disposal of stores; labor and employment; agriculture and forestry; public administration; housing; education; aliens; legal; miscellaneous.

—— *National Health Insurance. Medical Research Committee. The causation and prevention of trinitrotoluene (TNT) poisoning. Special report series No. 11. London, 1917. 85 pp. Price, 1s. net.*

This report is noted on pages 237 to 250 of this issue of the MONTHLY REVIEW.

IRELAND.—*Registrar General. Fifty-third detailed annual report of the registrar general for Ireland, containing a general abstract of the numbers of marriages, births, and deaths registered in Ireland during the year 1916. Dublin, 1917. 59 pp. Price, 9d. net.*

NETHERLANDS.—*Directie van den Arbeid. Verslag over het haventoezicht uitgeoeffend in 1916. Uitgegeven door het Departement van Landbouw, Nijverheid en Handel. Leiden, 1917. 115 pp. 3 charts.*

A report of the conditions of labor in the longshoremen's trade in Holland. There are presented data as to accidents, hours of labor and Sunday work, conditions growing out of the War, and a special chapter on the age distribution of longshoremen. A special law has been in force in the Netherlands since November 1, 1916, for the protection of this class of workmen.

SWEDEN.—*Livsmedelsförbrukningen inom mindre bemedlade hushåll åren 1914 och 1916 av K. Socialstyrelsen. Stockholm, 1917. 77 pp.*

For a digest of this study of the changes in the character of food consumption in Sweden, see pages 109 to 112 of this issue of the MONTHLY REVIEW.

UNOFFICIAL.

ANDREWS, JOHN B. *Labor laws in the crucible: Measures necessary for effectiveness during and after the War. Reprinted from the Survey for February 16, 1918. 8 pp.*

ASSOCIATION NATIONALE FRANÇAISE POUR LA PROTECTION DES FAMILLES DES MORTS POUR LA PATRIE. COMITÉ JURIDIQUE. *Le droit pendant la guerre: guide juridique et pratique pour les familles des victimes de la guerre et leurs conseils. Paris, Marchal et Godde, 1916. 216 pp.*

A practical guide to war-time legislation, for the families of victims of the War and their counsel, prepared by the juridical section of the National French Alliance for the purpose of simplifying the tasks of advocates, solicitors, notaries, teachers, presidents of industries, secretaries of mayors, and others called upon to give advice to families of men killed in the War.

BABCOCK, GEORGE D., IN COLLABORATION WITH REINALD TRAUTSCHOLD. *The Taylor system in Franklin management: Application and results. New York, The Engineering Magazine Co., 1917. 245 pp. Industrial Management Library.*

BAILEY, WILLIAM B., AND CUMMINGS, JOHN. *Statistics. Chicago, A. C. McClurg & Co., 1917. 153 pp. Bibliography.*

This book has been prepared for the use of those who desire some knowledge of the fundamentals of statistics, and for those who find it necessary to gather primary statistical facts, plan tables, tabulate the raw material, and present it to the public in such shape that it can be used for intelligent analysis and comparison. The chapters include the following titles: Gathering the raw material, Editing schedules, Tabulation, Ratios, Averages, Graphic Representation, Correlation.

BANKERS' TRUST CO.—*Report of special committee appointed to investigate increased living costs. New York, December 15, 1917. 22 pp.*

The report of a committee of bankers appointed to determine the amount of compensation to be distributed to employees for the six months ending December 31, 1917, in consideration of the recognized increase in the cost of food, clothing, and rent and fuel. Mostly statistical.

BELLOM, MAURICE. *Le préapprentissage. Étude suivie d'une proposition de loi. Paris, 1917. 30 pp.*

This treatise considers the cause, consequence and remedies for decadent apprenticeship, and discusses the character and application of preapprenticeship from a technical and financial point of view. It includes a proposed law covering the subject in consonance with the views of the author. It advocates the placing of children of both sexes, at the time they leave the primary schools in workshops where they may receive such general (nonspecialized) occupational training as will prepare them on reaching the age for entering an apprenticeship to choose with care the line of work

in which they wish to receive specialized training. The author argues that such training is not possible in the schools, but is obtainable only in shops especially designed for this purpose. The proposed law provides that such shops must be established by regularly constituted societies and specifies, among other things, that training shall be free of charge; that only children of wage earners (salariés) are to be admitted; that competitive requirements are not to be demanded; that the course of training shall cover two years; and that no primary school certificates shall be required.

BLACKMAR, F. W. *Lawrence Social Survey. Report of F. W. Blackmar, director, and E. W. Burgess, field surveyor, University of Kansas, to the Lawrence Social Survey Committee, Lawrence, Kans. Topeka, Kansas State Printing Plant, 1917. 122 pp.*

Eight organizations in Lawrence, Kans., cooperated to make possible this survey under the direction of the department of sociology of the University of Kansas. The committees of investigation which carried the work through numbered 10, viz, city planning, municipal administration, trade and industry, recreation, education, churches, delinquency, dependency, housing, and public health and sanitation, the titles of which indicate practically the scope of the findings of the survey.

Lawrence had a population of 12,884 in 1915 according to the State decennial census. The average size of its families is 3.58 members. Fourteen per cent of its population is of the colored race, and about 5 per cent foreign born. Data concerning the occupations represented among the registered voters of the community indicate the following distribution: Professional, 10.8 per cent; business, 13.9; employees (clerical and sales), 10.2; skilled laborers, 20.8; unskilled laborers, 23.9; and miscellaneous (not specified, students and retired), 20.4 per cent.

Weekly wage rates for May, 1914, for 419 men employed in Lawrence industries show that over one-half were receiving $11.50 or less per week—that is, no one in that group received as much as $600 a year. These figures, besides, do not include losses from unemployment, sickness, or other causes, which produce an estimated loss of 6.5 per cent in wages each week. "If this computation corresponds with the facts, we find that over two-thirds of the Lawrence wage earners receive less than $600 a year. Few persons would contend that $600 is sufficient to provide a comfortable livelihood in Lawrence." Responsibility for low wages and a low standard of living is divided. "One factor that is local is the practical absence of collective bargaining in Lawrence," and another is the recurring problem of unemployment.

Housing conditions in several sections of the city and in isolated cases were found to be "a menace to the community," calling for power on the part of the community to destroy insanitary, unhabitable houses, and to enforce certain minimum standards as to the percentage of a lot which may be covered by a house, the size of rooms, overcrowding and sanitary requirements.

BORDEN, RIGHT HON. SIR ROBERT. *The War and the future: Being a narrative compiled from speeches delivered at various periods of the War, in Canada, the United States, and Great Britain, with an introductory letter to the compiler, Percy Hurd. London, New York, and Toronto, Hodder and Stoughton, 1917. 164 pp.*

BRICKLEY, WILLIAM J., M. D. *The relation of alcohol to accidents. Reprinted from the Boston Medical and Surgical Journal, May 20, 1915. 11 pp.*

BRIEUX [EUGÈNE]. *Nos soldats aveugles. Note pour les directeurs des écoles de rééducation professionnelle. Second edition with added notes. Paris, Librairie Delagrave, 1917. 36 pp.*

Practical suggestions regarding the reeducation of blind soldiers in different vocations, with an earnest plea for general interest in their return to civil life under the most favorable conditions possible.

CAMUS, JEAN, AND OTHERS. *Rééducation fonctionnelle et rééducation professionnelle des blessés. Paris, Librairie J. B. Baillière et Fils, 19, rue Hautefeuille, 1917. 231 pp. Illustrated.*

A collection of articles on phases of the functional and vocational reeducation of the wounded, with a preface by Justin Godart, assistant secretary of state of the military health service.

CASUALTY ACTUARIAL AND STATISTICAL SOCIETY OF AMERICA. *Proceedings. October 31 and November 1, 1917. Vol. iv, Part I, No. 9. 230 Fifth Avenue, New York. [1918]. 247 pp.*

Contains an address by the president, James D. Craig, on "The war insurance act," and papers on the following subjects by the persons indicated: The theory and practice of law differentials, by I. M. Rubinow; Premiums and reserves of the Swiss accident insurance institution, by Joseph H. Woodward; Note on the construction of mortality tables by means of compound frequency curves, by Anne Fisher; Manufacturers' and contractors' public liability insurance, by G. F. Michelbacher; Some essentials of sickness statistics, by Edwin F. Kopf.

CHAMBER OF COMMERCE OF THE UNITED STATES. *Committee on Industrial Relations. Labor adjustment for war service. Washington, March 29, 1918. 4 pp.*

This pamphlet is a report of the committee on industrial relations regarding the arrangements which have been made in Rochester, N. Y., to adjust requirements for workers and to deal with related questions presented by a large increase in industrial activity occasioned by Government war contracts, the problem being to meet the situation without interrupting production through unrest and discontent among employees.

CLARKE, IDA CLYDE. *American women and the world war. New York and London, D. Appleton & Co., 1918. 545 pp.*

Records the beginnings of the massed effort of American women inspired by the present War. A chapter on Women in industry considers the rôle of the 2,000,000 women in factories in this country affected by the War, under the headings of Standards of industry for Government contracts, adopted by the National Women's Trade-Union League of America, committee on women's work in war time; Employment agencies and transportation; Cooperation with the Secretary of Labor; Federal inspection; Government shoe contracts; Women's work in war; and National labor standards.

COLE, G. D. H. *The world of labor. A discussion of the present and future of trade-unionism. 3d edition. London, G. Bell and Sons (Ltd.), 1917. 443 pp. Bibliography.*

The aim of this book is "to take the social problem at its most urgent, and the theory of syndicalism at its strongest point, and to endeavor to follow out, as clearly as possible, the forces that are going to the making, out of the mere fighting organization of the trade-unions, of something that has a claim to more than sympathy with its uphill fight * * * in the belief that the trade-unions are tending to establish a sovereignty of their own, limited no doubt in its sphere, but real and absolute within its proper competence."

CONFERENCE OF MAYORS AND OTHER CITY OFFICIALS OF NEW YORK STATE. *City planning. Proceedings of the eighth annual conference, Buffalo, June 12, 13, and 14, 1917. [1918.] Price $1.*

CONSUMERS' LEAGUE OF THE CITY OF NEW YORK. *Report for 1917. New York, 105 East 22d Street, 1918. 20 pp.*

Under the catch title "Campaigning against industrial evils," the report discusses the maintenance of labor standards, gives the results of a study of the hours of women employed in restaurants, of the practice of returning goods, and of the manufacture of soldiers' uniforms in tenements, announces the organization of the Junior Board, gives the results of its publicity work and of its cooperation with semiofficial bodies, and a report of the bureaus.

DEAN, ARTHUR D. *Our schools in war time and after. Boston, Ginn & Co. 1918. 335 pp. Illustrated.*

According to the author, who is professor of vocational education, Teachers College, Columbia University, and supervising officer, Bureau of Vocational Training, New York State Military Training Commission, "an evaluating test for each of our school subjects has at last been found. The test is the capacity of the subject to respond to a national need or a national ideal." This test is applied to a study of schools in their relation to the War and the community in chapters on Bringing the War into the schools, War and community uses of our schools, The field for industrial and trade schools, Our colleges and technical institutes, The opportunity for manual and household arts, The work impulses of youth, Organized boy power *v.* military drill, Red Cross and other community work, Reeducation of the disabled, Farm cadets, The organization of a cadet camp, and A summarized program of action. The chapter on Reeducation of the disabled gives an account of the work of training disabled soldiers in England, France, and Canada, with the United States plan for rehabilitation and reeducation.

FOXWELL, A. K. *Munition losses. Six months as principal overlooker in danger buildings. London, New York, and Toronto, Hodder & Stoughton, 1917. 156 pp.*

An effort "to give the general public an insight into the life of the munition worker," based upon the author's experience in the Woolwich arsenal during the third year of the War.

FRASER, HELEN. *Women and war work. New York, G. Arnold Shaw, 1918. 308 pp. Illustrated.*

Account of the activities of British women in war work, including chapters on Women and munitions, The protection of women in industry, which latter considers the welfare of women in factories in two divisions—intramural and extramural; "The women's land army," which now numbers over 258,300 whole and part time workers engaged in agricultural work, and a final chapter on Reconstruction.

GROEBEN, WILLIAM E. *Modern industrial housing. Philadelphia, Ballinger and Perrot, architects and engineers, 1918. 24 pp.*

"In selecting a house-building policy, the industrial employer would probably choose the one employed by our larger industrial corporations as herein described, because it appears to be the only satisfactory solution of the present problem, in which he must either limit his production or build houses for his employees. It is well to recognize the moral and economic importance of creating around industry the most favorable conditions for work, rest and recreation. The writer has herein undertaken to set forth clearly and concisely the salient problems confronting industrial employers, housing corporations, and communities, with the idea of assisting those who contemplate the erection of industrial houses in arriving at a practical method of procedure."

GULICK, SIDNEY L. *American democracy and Asiatic citizenship. New York, Charles Scribner's Sons, 1918. 257 pp.*

Part I—Political. Contains chapters on The new Asia and its significance for America; Japan: Her problems and claims; China: Our treaties and our treatment; An historical sketch of legislation dealing with immigration; An historical sketch of legislation dealing with naturalization; Democracy and citizenship; The rights and duties of nations; A policy and a program for constructive immigration legislation; and Criticisms criticised. Part II—Statistical. On Chinese in the United States; Japanese in the United States; Situation on the Pacific Coast; Situation in the Hawaiian Islands; Conclusion.

JAFFA, M. E. *Food standards. Berkeley, University of California, College of Agriculture, Agricultural Experiment Station. 4 pp.*

Tables showing the kinds and amounts of food which may be considered as a safe minimum for health and efficiency and the cost of a minimum diet for different ages.

JEWISH AGRICULTURAL AND INDUSTRIAL AID SOCIETY. *Annual report for 1917. New York, Evening Post Job Printing Office, Inc. [1918]. 46 pp.*

JOINT COMMITTEE ON LABOR PROBLEMS AFTER THE WAR. *A million new houses after the War. A statement on the housing problem as affected by the War, and some suggestions. London, Cooperative Printing Society Limited, 1917. 8 pp. Price 1d.*

Considers different phases of the problem under the heads of The extreme urgency, The extent of the shortage, What will happen when the rent restriction act expires? Who is to build the new cottages? The Government policy, What the Government ought to be called upon to do at once, and The cost.

—— *The problem of demobilization. A statement and some suggestions, including proposals for the reform of employment exchanges. London, Cooperative Printing Society Limited, 1916. 8 pp. Price 1d.*

Besides the reform of employment agencies, the other subjects considered are The numbers to be dealt with, The order of discharge, What the Government has promised to do, What for the munition workers? The machinery for finding new situations, The trade-union as employment agency, The need for employment exchanges, and The provision for unemployment.

LABOUR PARTY [GREAT BRITAIN]. *Labour problems after the War.* [*London*] *The Labour Party, 1 Victoria Street, SW 1, 1917. 15 pp.*

Resolutions which were carried unanimously at the annual conference of the Labor Party held at the Albert Hall, Manchester, in January, 1917, regarding the subjects of demobilization, the machinery for securing employment, the restoration of trade-union conditions, the prevention of unemployment, the maintenance of the standard of life, the legal minimum wage, the nationalization of railways, the nationalization of mines, agriculture, taxation, franchise, the position of women after the War, and education and child welfare.

LUSK, GRAHAM. *Food in war time. Philadelphia and London, W. B. Saunders Co., 1918. 46 pp.*

In three parts: I. A balanced diet; II. Calories in common life; III. Rules of saving and safety. The major parts of the books have appeared under articles entitled "Food in war times," in the Scientific Monthly, and "Calories in common life," in Saunders' Medical Clinics of North America.

MACDONALD, SARAH. *Simple health talks with women war workers. London, Methuen & Co. (Ltd.), 1917. 84 pp. Illustrated.*

This little volume is by the late matron of the Salford Maternity Training School and has an introduction by Ethel Basil Jayne, G. B. E., inspector general of women's welfare for Sir W. G. Armstrong, Whitworth & Co. (Ltd.).

MACTAVISH, J. M. *What labor wants from education.* [*London*], *The Workers' Educational Association, 14, Red Lion Square, Holborn, W C, 1916. 10 pp. Price 1d.*

MICHELL, H. *Profit sharing and producers' cooperation in Canada. Kingston* [*Ontario, Canada*], *The Jackson Press, 1918. 26 pp. Bulletin of the departments of history and political and economic science in Queen's University, Kingston, Ontario, Canada.*

A detailed study of Canadian experiments in profit sharing, labor copartnership, and producers' cooperation. Of the three systems, Canada has had 13 experiments in the first category, 9 in the second, and 8 examples of the third.

MORTON, JOHN A. J. *The industrial counterpoise as the foundation for social harmony and universal peace.* [*London,*] *The Athenaeum Press* [*1917*]. *126 pp. Price 1s. 6d. net.*

The expansion of a proposition published as an anonymous suggestion in 1903 in the form of a brochure entitled "A scheme for a national minimum wage and the extermination of poverty."

NATIONAL CHILD WELFARE ASSOCIATION, INC. FOUNDERS COMMITTEE. *A personal message concerning children in war time. New York, 1917. 32 pp. Illustrated.*

NATIONAL CONSUMERS' LEAGUE. *The case against nightwork for women. Court of Appeals, State of New York. A summary of "facts of knowledge" submitted on behalf of the people. Prepared April, 1914, by Louis D. Brandeis and Josephine Goldmark. New York, 1918. 452 pp.*

This edition is a revision to March 1, 1918, of the edition of 1914, with a new introduction by Josephine Goldmark treating of Labor laws in war time; Nightwork in the United States; The reversal of the New York "Williams" decision; New material on women's work—1. Greater morbidity of working women; 2. Infant mortality and the employment of mothers; 3, Health and output in nightwork.

NATIONAL HOUSING ASSOCIATION. *Housing betterment; a journal of housing advance issued quarterly by the National Housing Association [New York], February, 1918.*

—— *Housing problems in America. Proceedings of the Sixth National Conference on Housing, Chicago, October 15–17, 1917. 105 East 22d Street, New York City. 462 pp.*

A summary of the proceedings of this conference as respects industrial housing was published in the MONTHLY REVIEW for December, 1917, pp. 215–218.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Hours of work as related to output and health of workers. Cotton manufacturing. Research report No. 4. March, 1918. 15 Beacon St., Boston. 64 pp.*

—— *Strikes in American industry in war time, April 6 to October 6, 1917. Research Report No. 3, March, 1918. Boston, 15 Beacon Street, 1918. 20 pp.*

NATIONAL UNION OF WOMEN'S SUFFRAGE SOCIETIES. *Women and reconstruction: Some considerations relating to the position of women after the War. [London] National Union of Women's Suffrage Societies, 1917. 28 pp. Price 1s. 6d. net.*

An attempt to outline the situation which will arise after the War in its relation to the position of women and their enfranchisement.

NOLEN, JOHN. *Industrial housing; better homes for less money; the economic advantages of better planning and of residential decentralization. Cambridge, Mass., 1918. 16 pp.*

—— *War-time housing and community development; report to the Chamber of Commerce, Wilmington, Del. Cambridge, Mass., 1918. 28 pp.*

A housing survey of the war-time needs of Wilmington, Del., together with recommendations for methods of meeting the present housing shortage.

OPERATIVE COTTON SPINNERS' PROVINCIAL ASSOCIATION. *Thirty-eighth annual report for the year ending December 31, 1917, together with the financial statement for the year ending December 15, 1917, and a summary of the accounts. Bolton [England, 1918]. 144 pp.*

Comments on the cost of living and the advances in wages during 1917, stating that affecting operatives generally "advances of wages have kept pace with the rising cost of living," but that "the inadequate advances obtained in 1915 and 1916 have, however, left a good deal of leeway to make up. * * * Our piecework prices are now 40 per cent over standard." There were 1,082 claims for weekly compensation filed for incapacity resulting from injuries received while spinners and piecers were following their employment. The amount of compensation paid totaled £5,126 7s. 1d. ($24,947.40). Unsuccessful attempts to gain the 8-hour day are noted. The report includes the financial statement, a statement of the superannuation fund, and a brief review of the cotton trade in 1917.

OTIS, STANLEY L., COMPILER. *Tables of comparative benefits of various compensation laws. Revised and enlarged. Chicago and New York, The Spectator Co., November, 1917. 23 pp. Price, 50 cents.*

PATRIC, GLADYS. *A study of the housing and social conditions in the Ann Street District of Los Angeles, Cal., under the direction of the Department of Sociology of the University of Southern California. Los Angeles Society for the Study and Prevention of Tuberculosis [1918]. 28 pp.*

PENTY, ARTHUR J. *Old worlds for new. A study of the post-industrial state. London. George Allen & Unwin (Ltd.), Ruskin House, 40 Museum Street, WC 1. 1917. 186 pp.*

A series of articles, revised and published in book form, all but four of which appeared in the Daily Herald (London) immediately before the outbreak of the War. The author develops his theory of a guild system in industry in chapters on The Fabian compromise; On reasoning from fact; The economic, moral, and political contradictions of collectivism; The mediæval guild system; National guilds and the general strike; The abolition of the wage system; The evil of large organizations; The division of labor; Machinery and industry; Machinery and society; The ultimate base of industrialism; The place of handicraft; The ethics of consumption; The tyranny of the middleman; The strike for quality; The elimination of the middleman; The decentralization of industry; The redistribution of population; The reabsorption of the professions; The trade designer; The profession of architecture; The destructive consumption of surplus wealth; On property; The leisure and work states; and Conclusion.

ROSE, MARY SWARTZ. *Every-day foods in war time. New York, Macmillan, 1918. 117 pp.*

Started in response to a request for "a war message about food," this book is an effort to suggest methods to make it easier "to save wheat, meat, sugars, and fats" and to make out an acceptable bill of fare without excessive cost.

SPEEK, PETER ALEXANDER. *The single tax and the labor movement. Madison, Wis., 1917. 180 pp. Bulletin of the University of Wisconsin, No. 878. Economics and political science series, vol. 8, No. 3, pp. 247–426.*

The single-tax movement has always had kinship with the labor movement, but not until the appearance of a volume entitled as above has the connection been definitely stated in the title of a book. This volume describes briefly the rise of the single tax and the growth of the Central Labor Union of New York, within whose ranks was fought out the decisive battle between the theories of socialism and the single tax. There is described from original sources "the political uprising of organized labor," which occurred about 1886 and culminated in Henry George's mayoralty campaign in New York City; the organization of a political party representing the interests of labor; the division within that party caused by a contest for its control between the socialists and the single-tax followers of Henry George; the defeat of the socialists within the party at the Syracuse convention of August, 1887; the launching of the Progressive Labor Party as a result of the split; and the final elimination of both labor parties from American politics.

THOMSON, W. ROWAN. *The premium bonus system. A scheme for stimulating and increasing the productive capacity of industrial resources. Glasgow, McCorquodale & Co. (Ltd.), Caxton Works, 1917. 99 pp.*

An explanation of the Rowan premium bonus system of payment by results as applied to engineering and shipyard trades and the general run of industrial occupations, with a comparison of its advantages and methods with those of other systems for the same purpose. The author is a member of David Rowan & Co., marine engineers, Glasgow.

TODD, ARTHUR JAMES. *Theories of social progress. New York, Macmillan, 1918. 579 pp. Bibliography.*

TOOGOOD, GEORGE EDSON. *The principles of industrial administration. London, A. Brown & Sons (Ltd.) [1917]. 56 pp. Price 1s. net.*

Includes an introduction by W. L. Hichens and a special chapter on The Ministry of Munitions and ethical values in industry.

UNITED STATES STEEL AND CARNEGIE PENSION FUND. *Manager's seventh annual report for 1917.* [*Pittsburgh.*] *8 pp.*

Reports 3,013 active pension cases on January 1, and 2,933 on December 31, 1917, $712,506.65 being dispensed for pensions during the year; 46 active accident benefit cases on January 1 and 42 on December 31, 1917, $14,988.25 being the amount of disbursements. The total disbursements during the year, including administration expense, were $743,270.29, the expense of administration being 2.12 per cent of this amount.

VAUGHAN, ERNEST. *La rééducation professionnelle des soldats aveugles. Paris, Levé 1915. 117 pp. Illustrated. Reprinted in 1917. Paris, Ollendorff.*

The author suggests some practical methods of employing those blinded in the War. While it is always advantageous for the men to continue in their prewar employments if possible, there are many industries and occupations, allied or otherwise, which may be taught instead. Among them are brush making, mattress making, chair caning, telephone operating, massaging, shoemaking, basketry, farming, etc. Brush making is most quickly learned by the blind. The establishment of district workshops in which the blind may learn manual trades suited to their capabilities and sufficient as a means of livelihood is advocated, the salaries to be the same as those in similar private industries. The author also emphasizes the teaching of the Braille alphabet as of first importance. There is a list of State professional schools which have been opened in various places, and also an appendix containing an account of a school of printing for the blind at Ronchin-Lille, a discussion of books for the blind, and a description of some changes effected in the Braille characters.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION, WAR WORK COUNCIL, HOUSING COMMITTEE. *Report to the Secretary of War, January, 1918, on housing for women in war work. New York, 600 Lexington Avenue.* [*1918.*] *20 pp.*

Contains suggestions based on an investigation of the subject of housing women war workers in the United States, with plans for three types of buildings to meet the suggested requirements, prepared by Mr. Duncan Candler. These designs were made with a view to the permanent value of the buildings, so that after they cease to be needed for women workers they can be adapted to family use. The first type is being used in a permanent structure which the Young Women's Christian Association is now building as a demonstration in Charleston, S. C., for girls working in the naval uniform factory.

MONTHLY REVIEW

OF THE

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ORDER OF DIRECTOR GENERAL OF RAILROADS FIXING WAGES OF RAILROAD EMPLOYEES.

Following is reproduced in full the order promulgated May 25, 1918, by the Director General of Railroads fixing the wages of railroad employees. This order applies to the employees of 165 specified railroads, and to all terminal, union station, and switching companies, all or a majority of whose stock is owned by such railroads. The text of the report of the Railroad Wage Commission, made April 30, 1918, upon which the order was largely based, together with the appendixes to that report relating to cost of living and wages of railroad employees, is given on pages 21 to 45 of this number of the MONTHLY REVIEW.

UNITED STATES RAILROAD ADMINISTRATION,
OFFICE OF DIRECTOR GENERAL,
Washington, May 25, 1918.

GENERAL ORDER NO. 27.

PREAMBLE.

In promulgating this order I wish to acknowledge the patriotic service so unselfishly rendered by the Railroad Wage Commission, consisting of Messrs. Franklin K. Lane, Charles C. McChord, J. Harry Covington, and William R. Willcox, in connection with the important question of wages and hours of service of railroad employees, which I referred to them by my General Order No. 5, dated January 18, 1918.

This commission took hold of the task with great energy and devotion and has dealt with the entire subject in a thoroughly sympathetic spirit.

Manifestly in a matter of such magnitude and complexity it is impossible to find any general basis or formula which would correct every inequality and give satisfaction to every interest involved. But the commission has made an earnest effort to do justice to all

concerned. I have felt obliged, however, to depart from its recommendations in some particulars.

With respect to hours of service the commission says:

Manifestly, therefore, at this time, when men must be constantly taken from the railroads, as from all other industries, to fill the growing needs of the Nation's Army, hours of labor can not be shortened and thereby a greater number of men be required for railroad work. The Nation can not, in good faith, call upon the farmers and the miners to work as never before and press themselves to unusual tasks, and at the same time so shorten the hours of railroad men as to call from farm and mine additional and unskilled men to run the railroads. While the commission is strongly disposed to a standard day, in so far as the nature of the service will permit it, its firm judgment consequently is that the existing hours of service in effect on the railroads should be maintained for the period of the War.

But with this we earnestly urge that a most exhaustive study be made of this matter of hours of service, not with a view to the adoption of some arbitrary and universal policy which shall have no regard to the kind of work done or to the effect upon the railroad service, but with these very considerations in mind. And we have gone into this matter far enough to justify to ourselves the belief that by the steady application of such sympathetic consideration the railroad service may be improved, and at the same time fuller opportunity be given for lifting a burden that falls disproportionately upon some of the less favored of the railroad workers.

The commission also reached the conclusion that as to overtime "the existing rules and conditions of payment should not be disturbed during the period of the War." The commission has pointed out that this is not the time for any experiments which might lessen the tons of freight hauled and the number of passengers carried when the urgent and serious necessities of the War compel sacrifices from all, and that the adoption of any plan which would prevent the Government from working its men as long as they have been in the habit of working under private employers would be to take advantage of the grave war necessities of the Government and to embarrass it in carrying forward essential operations of the War at a time when the need of service was never greater and the ability to call in outside men is seriously impaired.

There has never been a time when the public interest demanded more urgently the devotion and unselfish service of all classes of railroad employees. I agree with the commission that it is not practicable at this time, when the War is calling upon every class of loyal citizens for service and sacrifices, to reduce the actual hours of labor to eight in every line of railroad work.

Nevertheless I am convinced that no further inquiry is needed to demonstrate that the principle of the basic eight-hour day is reasonable and just and that all further contentions about it should be set at rest by a recognition of that principle as a part of this decision.

Recognition of the principle of the basic eight-hour day in railroad service is, therefore, hereby made.

The question arises as to what further steps can and ought justly to be taken to strengthen the application of that principle, and when. This question must be solved in the light of the varied conditions of railroad employment and will have to be studied in detail by the Board of Railroad Wages and Working Conditions herein and hereby created and in the light of what is reasonably practicable under war conditions.

No problem so vast and intricate as that of doing practical justice to the 2,000,000 railroad employees of the country can be regarded as completely settled and disposed of by any one decision or order; therefore the Board of Railroad Wages and Working Conditions is hereby established and will take up as presented any phases of the general problem relating to any class of employees or any part of a class of employees which may justly call for further consideration.

It is my earnest hope that railroad officials and railroad employees will realize that their relations under Federal control are not based upon the old conditions of private management. Dissensions and disappointments should be forgotten and all should now remember that they are not only serving their country in the operation of the railroads, but that upon the character, quality, and loyalty of that service depends in large measure our success in this War.

It is an inspiring task—this task of putting upon a more just and equitable basis the wages and working conditions of loyal workers in railroad service—and I confidently expect the patriotic support and assistance of every railroad official and every railroad employee in performing that task with credit to each other and with honor to their country.

ORDER.

Respecting the wages, hours, and other conditions of employment of the employees of the railroads hereinafter mentioned,

It is hereby ordered:

ARTICLE I.—RAILROADS AFFECTED.

This order shall apply to the employees of the following railroads:

Alabama & Vicksburg Ry. Co.
Alabama Great Southern R. R. Co.
Ann Arbor R. R. Co.
Arizona & New Mexico Ry. Co.
Arizona Eastern R. R. Co.
Atchison, Topeka & Santa Fe Ry. Co.
Atlanta & West Point R. R. Co.
Atlanta, Birmingham & Atlantic Ry. Co.
Atlantic Coast Line R. R. Co.
Atlantic & St. Lawrence R. R. Co.
Atlantic City R. R. Co.
Baltimore & Ohio R. R. Co.
Bangor & Aroostook R. R. Co.
Bessemer & Lake Erie R. R. Co.
Boston & Maine R. R.
Buffalo & Susquehanna R. R. Corporation.
Buffalo, Rochester & Pittsburgh Ry. Co.

Carolina, Clinchfield & Ohio Ry.
Central of Georgia Ry. Co.
Central New England Ry. Co.
Central R. R. Co. of New Jersey.
Central Vermont Ry. Co.
Charleston & Western Carolina Ry. Co.
Chesapeake & Ohio Ry. Co.
Chicago & Alton R. R. Co.
Chicago & Eastern Illinois R. R. Co.
Chicago & Erie R. R. Co.
Chicago & Northwestern Ry. Co.
Chicago, Burlington & Quincy R. R. Co.
Chicago Great Western R. R. Co.
Chicago, Detroit & Canada Grand Trunk Junction R. R. Co.
Chicago, Indianapolis & Louisville Ry. Co.
Chicago, Milwaukee & St. Paul Ry. Co.
Chicago, Peoria & St. Louis R. R. Co.
Chicago, Rock Island & Gulf Ry. Co.
Chicago, Rock Island & Pacific Ry. Co.
Chicago, St. Paul, Minneapolis & Omaha Ry. Co.
Chicago, Terre Haute & Southeastern Ry. Co.
Cincinnati, Indianapolis & Western R. R. Co.
Cincinnati, New Orleans & Texas Pacific Ry. Co.
Cincinnati Northern R. R. Co.
Cleveland, Cincinnati, Chicago & St. Louis Ry. Co.
Coal & Coke Ry. Co.
Colorado & Southern Ry. Co.
Cumberland Valley R. R. Co.
Delaware & Hudson Co.
Delaware, Lackawanna & Western R. R. Co.
Denver & Rio Grande R. R. Co.
Detroit & Mackinac Ry. Co.
Detroit & Toledo Shore Line R. R. Co.
Detroit, Grand Haven & Milwaukee Ry. Co.
Detroit, Toledo & Ironton R. R. Co.
Duluth & Iron Range R. R. Co.
Duluth, Missabe & Northern Ry. Co.
Duluth, South Shore & Atlantic Ry. Co.
Elgin, Joliet & Eastern Ry. Co.
El Paso & Southwestern Co.
Erie R. R. Co.
Florida East Coast Ry. Co.
Fort Smith & Western R. R. Co.
Fort Worth & Denver City Ry. Co.
Fort Worth & Rio Grande Ry. Co.
Galveston, Harrisburg & San Antonio Ry. Co.
Georgia R. R. Lessee Organization.
Georgia Southern & Florida Ry. Co.
Grand Rapids & Indiana Ry. Co.
Grand Trunk Western Ry. Co.
Great Northern Ry. Co.
Gulf & Ship Island R. R. Co.
Gulf, Colorado & Santa Fe Ry. Co.
Gulf, Mobile & Northern R. R.
Hocking Valley Ry. Co.
Houston & Texas Central R. R. Co.
Houston East & West Texas R. R. Co.
Hudson & Manhattan R. R.
Illinois Central R. R. Co.
International & Great Northern Ry. Co.
Kanawha & Michigan Ry. Co.
Kansas City Southern Ry. Co.
Lake Erie & Western R. R. Co.
Lehigh & Hudson River Ry. Co.
Lehigh & New England R. R. Co.
Lehigh Valley R. R. Co.
Long Island R. R. Co.
Los Angeles & Salt Lake R. R. Co.
Louisiana & Arkansas Ry. Co.
Louisiana Ry. & Navigation Co.
Louisiana Western R. R. Co.
Louisville & Nashville R. R. Co.
Louisville, Henderson & St. Louis Ry. Co.
Maine Central R. R. Co.
Midland Valley R. R. Co.
Michigan Central R. R. Co.
Minneapolis & St. Louis R. R. Co.
Minneapolis, St. Paul & S. Ste. Marie Ry. Co.
Missouri, Kansas & Texas Ry. Co.
Missouri, Kansas & Texas Ry. Co. of Texas.
Missouri Pacific R. R. Co.
Mobile & Ohio R. R. Co.
Monongahela Ry. Co.
Morgan's, Louisiana & Texas R. R. & S. S. Co.
Nashville, Chattanooga & St. Louis Ry.
New Orleans & Northeastern R. R. Co.
New Orleans, Texas & Mexico R. R. Co.
New York Central R. R. Co.
New York, Chicago & St. Louis R. R. Co.
New York, New Haven & Hartford R. R. Co.

New York, Ontario & Western Ry. Co.
New York, Philadelphia & Norfolk R. R. Co.
New York, Susquehanna & Western R. R. Co.
Norfolk & Western Ry. Co.
Norfolk Southern R. R. Co.
Northern Pacific Ry. Co.
Northwestern Pacific R. R. Co.
Oregon Short Line R. R. Co.
Oregon-Washington R. R. & Navigation Co.
Panhandle & Santa Fe Ry. Co.
Pennsylvania Co.
Pennsylvania R. R. Co.
Pere Marquette R. R. Co.
Philadelphia & Reading Ry. Co.
Philadelphia, Baltimore & Washington R. R. Co.
Pittsburgh & Lake Erie R. R. Co.
Pittsburgh & Shawmut R. R. Co.
Pittsburgh & West Virginia Ry. Co.
Pittsburgh, Cincinnati, Chicago & St. Louis R. R. Co.
Port Reading R. R. Co.
Richmond, Fredericksburg & Potomac R. R. Co.
Rutland R. R. Co.
Seaboard Air Line Ry. Co.
San Antonio & Aransas Pass Ry. Co.
Southern Pacific Co.
Southern Ry. Co.
Southern Ry. Co. in Mississippi.
Spokane International Ry. Co.
Spokane, Portland & Seattle Ry. Co.
Staten Island Rapid Transit Ry. Co.
St. Joseph & Grand Island Ry. Co.
St. Louis, Brownsville & Mexico Ry. Co.
St. Louis-San Francisco Ry. Co.
St. Louis, San Francisco & Texas Ry. Co.
St. Louis Southwestern Ry. Co.
St. Louis Southwestern Ry. Co. of Texas.
Tennessee Central R. R. Co.
Texarkana & Fort Smith Ry. Co.
Texas & New Orleans R. R. Co.
Texas & Pacific Ry. Co.
Toledo & Ohio Central Ry. Co.
Toledo, Peoria & Western Ry. Co.
Toledo, St. Louis & Western R. R. Co.
Ulster & Delaware R. R. Co.
Union Pacific R. R. Co.
Utah Ry. Co.
Vicksburg, Shreveport & Pacific Ry. Co.
Virginian Ry. Co.
Wabash Ry. Co.
Washington Southern Ry. Co.
West Jersey & Seashore R. R. Co.
Western Maryland Ry. Co.
Western Pacific R. R. Co.
Western Ry. of Alabama.
Wheeling & Lake Erie R. R. Co.
Wichita Falls & Northwestern Ry. Co.
Wichita Valley Ry. Co.
Yazoo & Mississippi Valley R. R. Co.

And all terminal, union station, and switching companies, all or a majority of whose stock is owned by railroads named above.

Such other railroads as may be retained in Federal control on July 1, 1918, will be added to the foregoing list by order of the Director General.

The Pullman Co., whose status is now being considered, will also be added by order to the foregoing list, if decision shall be reached to retain it in Federal control.

ARTICLE II.—RATES OF WAGES AND METHODS OF COMPUTATION.

Increases in wages, effective as hereinafter provided, January 1, 1918, are hereby established as follows:

Section A.—Rates of wages of railroad employees paid upon a monthly basis.

[Columns 2 and 3 in this table are explanatory of the method of arriving at the "new rates" included in column 4. The roads will substitute for the "old rates" of December, 1915, scheduled in column 1 the "new rates" listed in column 4.]

1	2	3	4	1	2	3	4
To the monthly rate of pay of men receiving in December, 1915, the amounts named in this column.	Add the per cent named in this column.	Equivalent to amount named in this column.	Making new rate per month as shown in this column.	To the monthly rate of pay of men receiving in December, 1915, the amounts named in this column.	Add the per cent named in this column.	Equivalent to amount named in this column.	Making new rate per month as shown in this column.
Under $46[1]	.....	$20.00	.....	$95.01 to $96	33.70	$32.35	$128.35
$46.01 to $47	43	20.21	$67.21	$96.01 to $97	33.20	32.20	129.20
$47.01 to $48	43	20.64	68.64	$97.01 to $98	32.71	32.05	130.05
$48.01 to $49	43	21.07	70.07	$98.01 to $99	32.23	31.90	130.90
$49.01 to $50	43	21.50	71.50	$99.01 to $100	31.75	31.75	131.75
$50.01 to $51	42.35	21.60	72.60	$100.01 to $101	31.29	31.60	132.60
$51.01 to $52	41.73	21.70	73.70	$101.01 to $102	30.84	31.45	133.45
$52.01 to $53	41	21.73	74.73	$102.01 to $103	30.39	31.30	134.30
$53.01 to $54	41	22.14	76.14	$103.01 to $104	29.96	31.15	135.15
$54.01 to $55	41	22.55	77.55	$104.01 to $105	29.53	31.00	136.00
$55.01 to $56	41	22.96	78.96	$105.01 to $106	29.11	30.85	136.85
$56.01 to $57	41	23.27	80.37	$106.01 to $107	28.70	30.70	137.70
$57.01 to $58	41	23.78	81.78	$107.01 to $108	28.29	30.55	138.55
$58.01 to $59	41	24.19	83.19	$108.01 to $109	27.89	30.40	139.40
$59.01 to $60	41	24.60	84.60	$109.01 to $110	27.50	30.25	140.25
$60.01 to $61	41	25.01	86.01	$110.01 to $111	27.12	30.10	141.10
$61.01 to $62	41	25.42	87.42	$111.01 to $112	26.74	29.95	141.95
$62.01 to $63	41	25.83	88.83	$112.01 to $113	26.38	29.80	142.80
$63.01 to $64	41	26.24	90.24	$113.01 to $114	26.01	29.65	143.65
$64.01 to $65	41	26.65	91.65	$114.01 to $115	25.66	29.50	144.50
$65.01 to $66	41	27.06	93.06	$115.01 to $116	25.31	29.35	145.35
$66.01 to $67	41	27.47	94.47	$116.01 to $117	24.96	29.20	146.20
$67.01 to $68	41	27.88	95.88	$117.01 to $118	24.62	29.05	147.05
$68.01 to $69	41	28.29	97.29	$118.01 to $119	24.29	28.90	147.90
$69.01 to $70	41	28.70	98.70	$119.01 to $120	23.96	28.75	148.75
$70.01 to $71	41	29.11	100.11	$120.01 to $121	23.64	28.60	149.60
$71.01 to $72	41	29.52	101.52	$121.01 to $122	23.32	28.45	150.45
$72.01 to $73	41	29.93	102.93	$122.01 to $123	23.01	28.30	151.30
$73.01 to $74	41	30.34	104.34	$123.01 to $124	22.70	28.15	152.15
$74.01 to $75	41	30.75	105.75	$124.01 to $125	22.40	28.00	153.00
$75.01 to $76	41	31.16	107.16	$125.01 to $126	22.11	27.85	153.85
$76.01 to $77	41	31.57	108.57	$126.01 to $127	21.81	27.70	154.70
$77.01 to $78	41	31.98	109.98	$127.01 to $128	21.53	27.55	155.55
$78.01 to $79	41	32.39	111.39	$128.01 to $129	21.24	27.40	156.40
$79.01 to $80	40.87	32.70	112.70	$129.01 to $130	20.96	27.25	157.25
$80.01 to $81	40.44	32.75	113.75	$130.01 to $131	20.69	27.10	158.10
$81.01 to $82	40	32.80	114.80	$131.01 to $132	20.42	26.95	158.95
$82.01 to $83	40	33.20	116.20	$132.01 to $133	20.15	26.80	159.80
$83.01 to $84	40	33.60	117.60	$133.01 to $134	19.89	26.65	160.65
$84.01 to $85	40	34.00	119.00	$134.01 to $135	19.63	26.50	161.50
$85.01 to $86	39.36	33.85	119.85	$135.01 to $136	19.38	26.35	162.35
$86.01 to $87	38.74	33.70	120.70	$136.01 to $137	19.13	26.20	163.20
$87.01 to $88	38.13	33.55	121.55	$137.01 to $138	18.88	26.05	164.05
$88.01 to $89	37.53	33.40	122.40	$138.01 to $139	18.64	25.90	164.90
$89.01 to $90	36.95	33.25	123.25	$139.01 to $140	18.39	25.75	165.75
$90.01 to $91	36.38	33.10	124.10	$140.01 to $141	18.16	25.60	166.60
$91.01 to $92	35.82	32.95	124.95	$141.01 to $142	17.92	25.45	167.45
$92.01 to $93	35.27	32.80	125.80	$142.01 to $143	17.69	25.30	168.30
$93.01 to $94	34.74	32.65	126.65	$143.01 to $144	17.47	25.15	169.15
$94.01 to $95	34.22	32.50	127.50	$144.01 to $145	17.24	25.00	170.00

[1] Except as provided in par. 13, p. 22 [18].

Section A.—Rates of wages of railroad employes paid upon a monthly basis—Concluded.

1	2	3	4	1	2	3	4
To the monthly rate of pay of men receiving in December, 1915, the amounts named in this column.	Add the per cent named in this column.	Equivalent to amount named in this column.	Making new rate per month as shown in this column.	To the monthly rate of pay of men receiving in December, 1915, the amounts named in this column.	Add the per cent named in this column.	Equivalent to amount named in this column.	Making new rate per month as shown in this column.
$145.01 to $146	17.02	$24.85	$170.85	$197.01 to $198	8.61	$17.05	$215.05
$146.01 to $147	16.80	24.70	171.70	$198.01 to $199	8.49	16.90	215.90
$147.01 to $148	16.59	24.55	172.55	$199.01 to $200	8.375	16.75	216.75
$148.01 to $149	16.38	24.40	173.40	$200.01 to $201	8.26	16.60	217.60
$149.01 to $150	16.17	24.25	174.25	$201.01 to $202	8.14	16.45	218.45
$150.01 to $151	15.96	24.10	175.10	$202.01 to $203	8.03	16.30	219.30
$151.01 to $152	15.76	23.95	175.95	$203.01 to $204	7.92	16.15	220.15
$152.01 to $153	15.56	23.80	176.80	$204.01 to $205	7.80	16.00	221.00
$153.01 to $154	15.36	23.65	177.65	$205.01 to $206	7.69	15.85	221.85
$154.01 to $155	15.16	23.50	178.50	$206.01 to $207	7.58	15.70	222.70
$155.01 to $156	14.97	23.35	179.35	$207.01 to $208	7.48	15.55	223.55
$156.01 to $157	14.78	23.20	180.20	$208.01 to $209	7.37	15.40	224.40
$157.01 to $158	14.59	23.05	181.05	$209.01 to $210	7.26	15.25	225.25
$158.01 to $159	14.40	22.90	181.90	$210.01 to $211	7.16	15.10	226.10
$159.01 to $160	14.22	22.75	182.75	$211.01 to $212	7.05	14.95	226.95
$160.01 to $161	14.04	22.60	183.60	$212.01 to $213	6.95	14.80	227.80
$161.01 to $162	13.86	22.45	184.45	$213.01 to $214	6.85	14.65	228.65
$162.01 to $163	13.68	22.30	185.30	$214.01 to $215	6.74	14.50	229.50
$163.01 to $164	13.51	22.15	186.15	$215.01 to $216	6.64	14.35	230.35
$164.01 to $165	13.33	22.00	187.00	$216.01 to $217	6.54	14.20	231.20
$165.01 to $166	13.16	21.85	187.85	$217.01 to $218	6.445	14.05	232.05
$166.01 to $167	13.00	21.70	188.70	$218.01 to $219	6.35	13.90	232.90
$167.01 to $168	12.83	21.55	189.55	$219.01 to $220	6.25	13.75	233.75
$168.01 to $169	12.66	21.40	190.40	$220.01 to $221	6.15	13.60	234.60
$169.01 to $170	12.50	21.25	191.25	$221.01 to $222	6.06	13.45	235.45
$170.01 to $171	12.34	21.10	192.10	$222.01 to $223	5.96	13.30	236.30
$171.01 to $172	12.18	20.95	192.95	$223.01 to $224	5.87	13.15	237.15
$172.01 to $173	12.02	20.80	193.80	$224.01 to $225	5.78	13.00	238.00
$173.01 to $174	11.87	20.65	194.65	$225.01 to $226	5.69	12.85	238.85
$174.01 to $175	11.71	20.50	195.50	$226.01 to $227	5.595	12.70	239.70
$175.01 to $176	11.56	20.35	196.35	$227.01 to $228	5.50	12.55	240.55
$176.01 to $177	11.41	20.20	197.20	$228.01 to $229	5.415	12.40	241.40
$177.01 to $178	11.26	20.05	198.05	$229.01 to $230	5.33	12.25	242.25
$178.01 to $179	11.12	19.90	198.90	$230.01 to $231	5.24	12.10	243.10
$179.01 to $180	10.97	19.75	199.75	$231.01 to $232	5.15	11.95	243.95
$180.01 to $181	10.83	19.60	200.60	$232.01 to $233	5.065	11.80	244.80
$181.01 to $182	10.69	19.45	201.45	$233.01 to $234	4.98	11.65	245.65
$182.01 to $183	10.55	19.30	202.30	$234.01 to $235	4.89	11.50	246.50
$183.01 to $184	10.41	19.15	203.15	$235.01 to $236	4.81	11.35	247.35
$184.01 to $185	10.27	19.00	204.00	$236.01 to $237	4.73	11.20	248.20
$185.01 to $186	10.14	18.85	204.85	$237.01 to $238	4.64	11.05	249.05
$186.01 to $187	10.00	18.70	205.70	$238.01 to $239	4.56	10.90	249.90
$187.01 to $188	9.87	18.55	206.55	$239.01 to $240	.....	10.00	250.00
$188.01 to $189	9.74	18.40	207.40	$240.01 to $241	.....	9.00	250.00
				$241.01 to $242	.....	8.00	250.00
$189.01 to $190	9.61	18.25	208.25	$242.01 to $243	.....	7.00	250.00
$190.01 to $191	9.48	18.10	209.10	$243.01 to $244	.....	6.00	250.00
$191.01 to $192	9.35	17.95	209.95	$244.01 to $245	.....	5.00	250.00
$192.01 to $193	9.22	17.80	210.80	$245.01 to $246	.....	4.00	250.00
$193.01 to $194	9.10	17.65	211.65	$246.01 to $247	.....	3.00	250.00
$194.01 to $195	8.97	17.50	212.50	$247.01 to $248	.....	2.00	250.00
$195.01 to $196	8.85	17.35	213.35	$248.01 to $249	.....	1.00	250.00
$196.01 to $197	8.73	17.20	214.20	$249.01 to $250	.....	.00	250.00

METHOD OF APPLYING INCREASES TO MONTHLY RATES.

(1) The employee who holds the same position to-day that he did the last day of December, 1915, and who then received $75 a month and has received no increase since, will receive an additional wage of $30.75 per month. If he has received an increase in these two

years of $10 per month, the recommended increase of his wage will be cut down by that much, making his net advance $20.75.

(2) Employee "A" occupied the same position in 1915 and in 1918: Salary, 1915, $150 per month; 1918, $175 per month.

Basis of increase on salaries of $150 per month is 16.17 per cent, or $24.25 per month. New salary, $174.25; present salary, $175. Present salary undisturbed.

(3) Employee "B" in 1915 received $100, and on the same desk in 1918 received $112.50 per month. Basis of increase on $100, 31.75 per cent, or $31.75. New salary, $131.75. Present salary, $112.50. Employee "B" is entitled to receive back pay from January 1, at the rate of $19.25 (the difference between $131.75 and $112.50), and to receive monthly, hereafter, $131.75 instead of $112.50. Back pay due January 1 to May 31, $96.25.

(4) Employee in December, 1915, received $100 per month, entitles him, with this increase, to $131.75. His salary had been raised for same position on January 1, 1918, to $135. He is not, therefore, entitled to any advance or back pay. Present salary undisturbed.

Section B.—Rates of wages of railroad employees paid upon daily basis.

["Old rates" are those of December, 1915.]

Old rate per day.	New rate per day.	Old rate per day.	New rate per day.	Old rate per day.	New rate per day.	Old rate per day.	New rate per day.
$0.75	$1.52	$2.50	$3.53	$4.25	$5.40	$5.95	$6.85
.80	1.57	2.55	3.60	4.30	5.45	6.00	6.90
.85	1.62	2.60	3.67	4.35	5.49	6.05	6.94
.90	1.67	2.65	3.74	4.40	5.53	6.10	6.98
.95	1.72	2.70	3.81	4.45	5.58	6.15	7.02
1.00	1.77	2.75	3.88	4.50	5.62	6.20	7.06
1.05	1.82	2.80	3.95	4.55	5.66	6.25	7.11
1.10	1.87	2.85	4.02	4.60	5.71	6.30	7.15
1.15	1.92	2.90	4.09	4.65	5.75	6.35	7.19
1.20	1.97	2.95	4.16	4.70	5.79	6.40	7.23
1.25	2.02	3.00	4.23	4.75	5.83	6.45	7.28
1.30	2.07	3.05	4.30	4.80	5.88	6.50	7.32
1.35	2.12	3.10	4.36	4.85	5.92	6.55	7.36
1.40	2.17	3.15	4.41	4.90	5.96	6.60	7.41
1.45	2.22	3.20	4.48	4.95	6.00	6.65	7.45
1.50	2.27	3.25	4.55	5.00	6.05	6.70	7.49
1.55	2.32	3.30	4.60	5.05	6.09	6.75	7.53
1.60	2.37	3.35	4.65	5.10	6.13	6.80	7.58
1.65	2.42	3.40	4.70	5.15	6.17	6.85	7.62
1.70	2.47	3.45	4.72	5.20	6.21	6.90	7.66
1.75	2.52	3.50	4.77	5.25	6.26	6.95	7.70
1.80	2.57	3.55	4.81	5.30	6.30	7.00	7.75
1.85	2.65	3.60	4.85	5.35	6.34	7.05	7.79
1.90	2.72	3.65	4.90	5.40	6.38	7.10	7.83
1.95	2.77	3.70	4.94	5.45	6.43	7.15	7.88
2.00	2.83	3.75	4.98	5.50	6.47	7.20	7.91
2.05	2.89	3.80	5.03	5.55	6.51	7.25	7.96
2.10	2.96	3.85	5.07	5.60	6.55	7.30	8.00
2.15	3.03	3.90	5.11	5.65	6.60	7.35	8.04
2.20	3.10	3.95	5.15	5.70	6.64	7.40	8.08
2.25	3.17	4.00	5.20	5.75	6.68	7.45	8.13
2.30	3.24	4.05	5.24	5.80	6.73	7.50	8.17
2.35	3.31	4.10	5.28	5.85	6.77	7.55	8.21
2.40	3.38	4.15	5.32	5.90	6.81	7.60	8.25
2.45	3.45	4.20	5.36				

For common labor paid by the day, the scale of new rates per day shown shall apply, with the provision, however, that as a minimum 20 cents per 8-hour day, 22½ cents per 9-hour day, 25 cents per 10-hour day, 27½ cents per 11-hour day, and 30 cents per 12-hour day will be added to the rates paid per day as of December 31, 1917.

METHOD OF APPLYING INCREASES TO DAILY RATES.

(1) Employee, December, 1915, $3:

Increased to new rate of $4.23 per day			$109.98
Jan. 1, 1918, his pay was raised for same work to $3.50 per day, equal per month to			91.00
Difference in pay:			
1 month			18.98
5 months			94.90
An 8-hour 26-day month both years.			
Worked 62 hours overtime, at new 1918 rate	52.9¢	$32.80	
Was paid 62 hours overtime at	37.5¢	23.25	9.55
Total back pay due Jan. 1 to May 31, 1918			104.45

(2) Employee "C" was employed in 1918, but not in 1915. Rate of pay on the district where he is employed in 1918, in 1915 was $1.10 per day. The 1918 rate of pay is, on the same district, $1.50 per day. The new rate is $1.87 per day. He will, therefore, be entitled to receive from January 1, 1918, to May 31, 1918, 37 cents per day additional for each day he worked in that period.

Section C.—Rates of wages of railroad employees paid upon hourly basis.

[Rates of pay in cents per hour.]

Old rate per hour.[1]	New rate per hour.	Old rate per hour.[1]	New rate per hour.	Old rate per hour.[1]	New rate per hour.	Old rate per hour.[1]	New rate per hour.
10	19.75	23	33.00	36	51.00	49	64.25
10.5	20.25	23.5	33.75	36.5	51.50	49.5	64.75
11	20.75	24	34.50	37	52.25	50	65.00
11.5	21.25	24.5	35.00	37.5	53.00	50.5	65.25
12	21.75	25	35.50	38	53.75	51	65.75
12.5	22.25	25.5	36.00	38.5	54.25	51.5	66.25
13	22.75	26	36.75	39	54.75	52	66.50
13.5	23.25	26.5	37.50	39.5	55.50	52.5	67.00
14	23.75	27	38.25	40	56.00	53	67.50
14.5	24.25	27.5	39.00	40.5	56.75	53.5	68.00
15	24.75	28	39.50	41	57.25	54	68.25
15.5	25.25	28.5	40.25	41.5	57.75	54.5	68.75
16	25.75	29	41.00	42	58.25	55	69.25
16.5	26.25	29.5	41.75	42.5	58.50	55.5	69.75
17	26.75	30	42.50	43	59.00	56	70.00
17.5	27.25	30.5	43.00	43.5	59.50	56.5	70.50
18	27.75	31	43.75	44	60.00	57	71.00
18.5	28.25	31.5	44.50	44.5	60.25	57.5	71.50
19	28.75	32	45.25	45	60.75	58	71.75
19.5	29.25	32.5	46.00	45.5	61.25	58.5	72.25
20	29.75	33	46.75	46	61.50	59	72.75
20.5	30.25	33.5	47.25	46.5	62.00	59.5	73.00
21	30.75	34	48.00	47	62.50	60	73.50
21.5	31.25	34.5	48.75	47.5	63.00	60.5	74.00
22	31.75	35	49.50	48	63.25	61	74.50
22.5	32.25	35.5	50.25	48.5	63.75	61.5	74.75

[1] "Old rates" are those of December, 1915.

Section C.—Rates of wages of railroad employees paid upon hourly basis—Concluded.

Old rate per hour.	New rate per hour.	Old rate per hour.	New rate per hour.	Old rate per hour.	New rate per hour.	Old rate per hour.	New rate per hour.
62	75.25	77	88.00	92	100.75	107	113.50
62.5	75.75	77.5	88.25	92.5	101.25	107.5	114.00
63	76.00	78	88.75	93	101.50	108	114.25
63.5	76.50	78.5	89.25	93.5	102.00	108.5	114.75
64	76.75	79	89.75	94	102.50	109	115.25
64.5	77.25	79.5	90.00	94.5	102.75	109.5	115.75
65	77.75	80	90.50	95	103.25	110	116.00
65.5	78.25	80.5	91.00	95.5	103.75	110.5	116.50
66	78.50	81	91.50	96	104.25	111	117.00
66.5	79.00	81.5	91.75	96.5	104.50	111.5	117.25
67	79.50	82	92.25	97	105.00	112	117.75
67.5	79.75	82.5	92.75	97.5	105.50	112.5	118.25
68	80.25	83	93.00	98	106.00	113	118.50
68.5	80.75	83.5	93.50	98.5	106.25	113.5	119.00
69	81.25	84	94.00	99	106.75	114	119.50
69.5	81.50	84.5	94.50	99.5	107.25	114.5	119.75
70	82.00	85	94.75	100	107.50	115	120.00
70.5	82.50	85.5	95.25	100.5	108.00	115.5	120.00
71	83.00	86	95.75	101	108.25	116	120.00
71.5	83.25	86.5	96.00	101.5	108.75	116.5	120.00
72	83.75	87	96.50	102	109.25	117	120.00
72.5	84.25	87.5	97.00	102.5	109.75	117.5	120.00
73	84.50	88	97.25	103	110.00	118	120.00
73.5	85.00	88.5	97.75	103.5	110.50	118.5	120.00
74	85.50	89	98.25	104	111.00	119	120.00
74.5	86.00	89.5	98.50	104.5	111.25	119.5	120.00
75	86.25	90	99.00	105	111.75	120	120.00
75.5	86.75	90.5	99.50	105.5	112.25		
76	87.00	91	99.75	106	112.75		
76.5	87.50	91.5	100.25	106.5	113.00		

While it is expected that the Board of Railroad Wages and Working Conditions hereinafter created shall give consideration to all questions of inequality as between individuals and classes of employees throughout, sufficient information is available to justify certain conclusions with respect to the mechanical crafts, and in the case of machinists, boilermakers, blacksmiths, and other shop mechanics who have been receiving the same hourly rates, the increases named in this order shall apply, with a minimum wage of 55 cents per hour.

It is recognized that this may still leave among shop employees certain inequalities as to individual employees, to which the Board of Railroad Wages and Working Conditions will give prompt consideration.

For common labor paid by the hour, the scale named herein shall apply, with the provision, however, that as a minimum, 2½ cents per hour will be added to the rates paid per hour, as of December 31, 1917.

METHOD OF APPLYING INCREASES TO HOURLY RATES.

(1) Machinist worked in January, 1918, 8 hours per day, 27 days, total 216 hours straight time.

The rate of pay for this position in December, 1915, was 34 cents per hour; new rate under this order, 48 cents per hour, but with minimum rate of 55 cents per hour as herein ordered, will receive	$118.80
In January, 1918, his rate of pay was 37½ cents per hour, for 216 hours, equals	81.00
Difference 1 month	37.80

On basis of working same amount straight time each month for 5 months (Jan. 1 to May 31)		$189.00
Also worked in same period 90 hours overtime at time and one-half, new 55 cents minimum rate, or 82½ cents, equals	$74.25	
Was paid 56¼ cents (time and one-half)	50.63	
		23.62
Balance due Jan. 1 to May 31, 1918		212.62

(2) Machinist worked in January, 1918, 10 hours per day, 26 days, total 260 hours straight time.

The rate of pay for this position in 1915 was 34 cents per hour; new rate under this order, 48 cents per hour, but with minimum rate of 55 cents per hour as herein ordered, will receive		$143.00
In January, 1918, his rate of pay was 37½ cents per hour; 260 hours equals		97.50
Difference 1 month		45.50
On basis of working same amount of straight time each month for 5 months (Jan. 1 to May 31)		227.50
Also worked in same period 90 hours overtime at pro rata rate, new 55-cent minimum rate, equals	$49.50	
Was paid at 37½-cent rate pro rata overtime, or	33.75	
		15.75
Balance due Jan. 1 to May 31, 1918		243.25

(3) Machinist "D" was employed in the same shop in December, 1915, and in 1918 on the same class of work. His hourly rate in December, 1915, was 35 cents for 9 hours, 26 days a month. He was paid for overtime and Sunday work at time and one-half. On January 1, 1918, his hours were reduced to 8 and his rate increased to 40 cents. The new hourly rate applicable to his 1915 rate—viz, 49½ cents—being less than the minimum of 55 cents, his new rate will be 55 cents per hour. In 1918, from January 1 to May 31, he worked 234 hours per month or an average of one hour overtime daily on the 1918 schedule. This for five months gives him 130 hours' overtime. He has been paid as follows:

1,040 hours straight time, at 40 cents	$416.00
130 hours overtime, at 60 cents	78.00
Total	494.00

His back pay will be computed as follows:

1,040 hours straight time, at 55 cents	$572.00
130 hours overtime, at 82½ cents	107.25
Total	679.25
Deduct payment at 1918 rates	494.00
Back pay due	185.25

and his future rate per hour will be 55 cents.

(4) In the case of employee "E," who was employed in a shop where the rate for his position was 35 cents per hour for 8 hours' work in 1915, with time and one-half for overtime, but in the same position

and same shop with the same hours in 1918 his rate is 45 cents per hour; his earnings in 1915 in the standard 208-hour month would be $72.80 per month, and he would be entitled to the new hourly rate of 49½ cents per hour. His straight time and overtime earnings and back pay would be computed in exactly the same manner as machinist "D." The principles illustrated will apply to all men paid by the hour, whatever their occupation may be.

Section D.—Rates of wages of railroad employees paid upon piecework basis.

METHOD OF APPLYING INCREASES TO PIECE RATES.

(1) The pieceworker shall receive for each hour worked the same increase per hour as is awarded to the hourly worker engaged in similar employment in the same shop.

(2) If the hourly rate has been increased since 1915 to an amount greater than the increase herein fixed, then the higher rate shall prevail.

(3) Where there was no piece rate for an item or operation in the piece-rate schedule of 1915, adjust the current price by such an amount as a similar item or operation has been increased or decreased since December 31, 1915, or as near such a plan as practicable.

(4) It is understood that the application of this order shall not, in any case, operate to reduce current earnings.

(5) When a pieceworker works overtime or undertime, he shall receive that proportion of the increase provided in the schedule which the time actually worked bears to the normal time in the position.

(6) Overtime is not to be considered solely as the number of hours employed in excess of the normal hours per month in the position, but rather the time employed in excess of the normal hours per day.

(7) Employee "F" was employed under a piecework schedule in a shop where the basic hourly rate was 35 cents for eight hours, with time and one-half for overtime. This rate under the plan illustrated above will be increased to 49½ cents per hour. Difference, 14½ cents.

Regardless of the schedule of piece rates under which he is paid, under this order "F" will be entitled to receive 14½ cents per hour in addition to his piecework earnings for every hour worked in 1918 unless the hourly rate shall in the interim have been raised and a proportionate increase made in the piecework schedule.

For example: Assume that "F" made $90 in December, 1915, at his piecework. At the hourly rate he would have earned only $72.80, and his hourly rate must therefore be increased to 49½ cents.

If in January, 1918, he has attained sufficient skill to earn $100 on the same piecework schedule, he will be entitled to receive, nevertheless, 14½ cents per hour for each hour of straight time worked and

for each hour of overtime 21¾ cents additional (if time and one-half for overtime is in effect).

Assume that in the five months, January 1 to May 31, "F" has worked 1,040 hours straight time and 130 hours overtime, and has at his piecework schedule earned $500. He will be entitled, nevertheless, to receive as back pay the following amount:

1,040 hours, at 14½ cents per hour	$150.80
130 hours, at 21¾ cents per hour	28.28
	179.08

But if in January, 1918, the basic hourly rate had been increased to 50 cents, and this increase had been correspondingly expressed in his piecework schedule, he would be entitled to no back pay. If, on the other hand, the hourly rate had been increased from 35 cents in 1915 to 45 on January 1, 1918, and this increase had been expressed in a corresponding increase in the piecework schedule, then "F" would be entitled to receive back pay at 4½ cents per hour for straight time and 6¾ cents per hour overtime.

If the practice in the shop, however, had been to pay pro rata for overtime, then the rate for such overtime since January 1, 1918, would be pro rata at 4½ cents or 14½ cents per hour, according to whether piece rates had been or had not been increased.

(8) Employee's December, 1915, rate was 38½ cents; which rate in this order for eight hours per day entitles him to 54¼ cents per hour. His basic rate had by January 1, 1918, been raised to 42½ cents per hour. Piecework rates had not been raised in the interval. This man earned in 208 hours $100. He is entitled to a raise of 11¾ cents per hour.

11¾ cents × 208:

1 month	$24.44
5 months	122.20

Section E.—Rates of wages of railroad employees paid upon mileage basis.

The following rates will apply "per day" or its established equivalent in "miles":

Passenger engineers.		Passenger engineers.		Passenger engineers.		Passenger engineers.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$4.10	$4.56	$4.53	$5.04	$4.95	$5.51	$5.55	$6.17
4.15	4.62	4.55	5.06	5.00	5.56	5.65	6.29
4.20	4.67	4.60	5.12	5.05	5.62	5.90	6.56
4.25	4.73	4.65	5.17	5.13	5.71	6.00	6.68
4.30	4.78	4.70	5.23	5.15	5.73	6.05	6.73
4.35	4.84	4.75	5.28	5.28	5.87	6.25	6.95
4.40	4.90	4.78	5.32	5.35	5.95	6.30	7.01
4.45	4.95	4.80	5.34	5.40	6.01	6.50	7.23
4.50	5.01	4.90	5.45	5.53	6.15	7.00	7.79

Passenger firemen.		Passenger firemen.		Passenger firemen.		Passenger firemen.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$1.91	$2.46	$2.60	$3.35	$2.84	$3.66	$3.30	$4.25
2.25	2.90	2.62	3.37	2.85	3.67	3.35	4.31
2.33	3.00	2.65	3.41	2.90	3.73	3.40	4.38
2.34	3.01	2.69	3.46	2.95	3.80	3.45	4.44
2.40	3.09	2.70	3.48	3.00	3.86	3.60	4.64
2.42	3.12	2.75	3.54	3.05	3.93	3.75	4.83
2.45	3.15	2.76	3.55	3.10	3.99	4.00	5.15
2.50	3.22	2.78	3.58	3.15	4.06	4.15	5.34
2.51	3.23	2.80	3.61	3.20	4.12	4.25	5.47
2.55	3.28						

Passenger conductors.		Passenger conductors.		Passenger conductors.		Passenger conductors.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$2.50	$2.89	$2.68	$3.10	$2.90	$3.35	$3.47	$4.01
2.60	3.00	2.75	3.18				

Passenger baggagemen.		Passenger baggagemen.		Passenger baggagemen.		Passenger baggagemen.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$1.40	$1.94	$1.49	$2.06	$1.61	$2.23	$1.70	$2.35
1.45	2.00	1.54	2.13	1.65	2.28	2.00	2.77

Passenger trainmen.		Passenger trainmen.		Passenger trainmen.		Passenger trainmen.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$1.35	$1.88	$1.47	$2.05	$1.50	$2.09	$1.60	$2.23
1.43	1.99	1.49	2.08	1.55	2.16	1.87	2.61
1.46	2.04						

Freight engineers.		Freight engineers.		Freight engineers.		Freight engineers.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$4.25	$4.91	$5.05	$5.83	$5.40	$6.24	$5.90	$6.81
4.50	5.20	5.06	5.84	5.43	6.27	5.95	6.87
4.70	5.43	5.10	5.89	5.45	6.29	5.995	6.925
4.75	5.49	5.13	5.93	5.50	6.35	6.00	6.93
4.80	5.54	5.145	5.95	5.55	6.41	6.10	7.05
4.85	5.60	5.15	5.95	5.555	6.415	6.25	7.22
4.86	5.61	5.17	5.97	5.60	6.47	6.50	7.51
4.87	5.62	5.20	6.01	5.61	6.48	6.75	7.80
4.88	5.64	5.25	6.06	5.65	6.53	6.80	7.85
4.89	5.65	5.28	6.10	5.665	6.545	6.85	7.91
4.90	5.66	5.30	6.12	5.70	6.58	6.90	7.97
4.95	5.72	5.33	6.16	5.75	6.64	6.95	8.03
4.97	5.74	5.35	6.18	5.83	6.73	7.00	8.09
5.00	5.78	5.39	6.23	5.85	6.76	7.25	8.37

Freight firemen.		Freight firemen.		Freight firemen.		Freight firemen.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$2.25	$3.02	$2.93	$3.93	$3.23	$4.34	$3.75	$5.03
2.36	3.17	2.95	3.96	3.245	4.355	3.80	5.10
2.45	3.29	3.00	4.03	3.25	4.36	3.90	5.24
2.47	3.32	3.01	4.04	3.30	4.43	3.905	5.245
2.50	3.36	3.03	4.07	3.35	4.50	3.95	5.30
2.56	3.44	3.04	4.08	3.40	4.56	4.00	5.37
2.59	3.48	3.05	4.09	3.45	4.63	4.05	5.44
2.60	3.49	3.07	4.12	3.465	4.65	4.10	5.50
2.70	3.62	3.10	4.16	3.50	4.70	4.125	5.535
2.75	3.69	3.13	4.20	3.55	4.77	4.18	5.61
2.78	3.73	3.15	4.23	3.57	4.79	4.25	5.71
2.81	3.77	3.16	4.24	3.60	4.83	4.30	5.77
2.85	3.83	3.19	4.28	3.63	4.87	4.50	6.04
2.87	3.85	3.20	4.30	3.65	4.90	4.55	6.11
2.90	3.89	3.22	4.32	3.70	4.97		

Freight conductors.		Freight conductors.		Freight conductors.		Freight conductors.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$2.31	$2.78	$4.24	$5.11	$4.54	$5.47	$4.88	$5.88
2.90	3.49	4.25	5.12	4.55	5.48	4.96	5.98
3.46	4.17	4.27	5.15	4.63	5.58	5.04	6.07
3.63	4.37	4.38	5.28	4.64	5.59	5.08	6.12
3.85	4.64	4.40	5.30	4.66	5.62	5.10	6.15
3.90	4.70	4.42	5.33	4.74	5.71	5.14	6.19
3.975	4.79	4.43	5.34	4.77	5.75	5.21	6.28
4.00	4.82	4.48	5.40	4.80	5.78	5.67	6.83
4.10	4.94	4.50	5.42	4.83	5.82	5.69	6.86
4.13	4.98	4.51	5.43	4.84	5.83	6.12	7.37
4.165	5.02	4.53	5.45	4.86	5.86	6.45	7.77
4.18	5.04	4.53	5.46	4.87	5.87	7.09	8.54

Freight brakemen and flagmen.		Freight brakemen and flagmen.		Freight brakemen and flagmen.		Freight brakemen and flagmen.	
Old.	New.	Old.	New.	Old.	New.	Old.	New.
$1.60	$2.23	$2.70	$3.77	$3.02	$4.21	$3.48	$4.85
1.89	2.64	2.72	3.79	3.10	4.32	3.60	5.02
1.93	2.69	2.75	3.84	3.13	4.37	3.62	5.05
2.14	2.99	2.78	3.88	3.14	4.38	3.66	5.11
2.25	3.14	2.80	3.91	3.15	4.39	3.707	5.17
2.33	3.25	2.82	3.93	3.20	4.46	3.71	5.18
2.40	3.35	2.83	3.95	3.21	4.48	3.93	5.48
2.42	3.38	2.85	3.98	3.25	4.53	4.24	5.91
2.48	3.46	2.88	4.02	3.29	4.59	4.26	5.94
2.60	3.63	2.95	4.12	3.33	4.65	4.62	6.44
2.62	3.65	2.98	4.16	3.41	4.76	4.96	6.92
2.65	3.70	2.99	4.17	3.46	4.83	5.37	7.49
2.67	3.72	3.00	4.19				

"Old" rates are those of December, 1915.

If there were mileage rates in effect in December, 1915, which are not included in the above tables, they shall be increased in accordance with the following percentages:

	Per cent.
Road passenger engineers and motormen	11¼
Road passenger firemen and helpers	28¾
Road passenger conductors	15½
Road passenger baggagemen	38¼
Road passenger brakemen and flagmen	39½
Road freight engineers and motormen	15½
Road freight firemen and helpers	34¼
Road freight conductors	20½
Road freight brakemen and flagmen	39½

METHOD OF APPLYING INCREASES TO MILEAGE BASIS.

(1) Rates for overtime as now in effect, whether providing for pro rata basis or in excess thereof, shall be increased by same percentage as straight time rates.

(2) Miles run in excess of the established equivalent of a day (or of a month where such basis prevails) shall be paid for pro rata.

(3) If any increase has been made in the mileage rates of employees paid on that basis in December, 1915, it will be understood that the per cent of increase allowed by this order is inclusive of such interim increases and that the new rate is computed from the base rates of December, 1915.

(4) Example (1): Engineer "G," passenger service, received $4.25 per day of 100 miles in 10 hours in December, 1915. According to this plan, although in 1918 this rate was $4.25 per hundred miles in 8 hours, the rate will be increased 11¼ per cent to $4.73 per 100 miles ($4.7281 equalized as $4.73). He will be entitled to back pay for every 100 miles run at the rate of 48 cents per 100 miles.

Example (2):

Conductor through freight:		
2,950 miles at 4 cents, at new rate, would entitle him to 4.82 cents, or..		$142.19
He was paid		118.00
Leaving to be paid		24.19
He made 26 hours and 10 minutes overtime, equivalent, on basis of 12½ miles per hour to 327 miles, which, at the increased rate of 4.82 cents per mile, entitles him to	$15.76	
Was paid, at 4 cents per mile	13.08	
A difference of		2.68
One month		26.87
Five months		134.35

This principle will apply to all employees of the train and engine service who are paid on the mileage basis. There are some railroads in the United States upon which men in the train and engine service are paid on a monthly wage. Such employees will be entitled to the increased rates named in article 2, section A.

(5) Since the application of the increases hereby granted will tend in individual cases to give increases greater than is appropriate or necessary to those train and engine men who make abnormal amounts of mileage and who, therefore, make already abnormally high monthly earnings, the officials of each railroad shall take up with the respective committees of train and engine men the limitation of mileage made per month by employees paid upon a mileage basis, so as to prevent employees now making such abnormal mileage profiting by the wage increases herein fixed greatly in excess of employees habitually

making a normal amount of mileage. It shall be understood that any such limitation of mileage so arrived at shall not preclude the officials of a railroad from requiring a train or engine man to make mileage in excess of this limitation when the necessities of the service require it. The officials of each railroad will report to the Regional Director such arrangements agreed upon and any cases of failure to reach such agreements.

Section F.—General rules for application of wage increases.

(1) In the application of the scale the wage runs with the place. If in the past two years an employee has been promoted, his new wage is based upon the rate of increase applicable to the new schedule governing the position to which he has been promoted.

(2) In applying these percentages to the hourly, daily, monthly, or mileage rates for December, 1915, in order to determine the rates to be applied, beginning January 1, 1918, each decimal fraction over 1 per cent shall be equalized as follows:

Less than one-fourth of 1 per cent as one-fourth of 1 per cent.

Over one-fourth of 1 per cent, but less than one-half of 1 per cent, as one-half of 1 per cent.

Over one-half of 1 per cent, but less than three-fourths of 1 per cent, as three-fourths of 1 per cent.

Over three-fourths of 1 per cent, as 1 per cent.

(3) These increases are to be applied to the rates of wages in effect on December 31, 1915. They do not represent a net increase at this time.

(4) As to the employee who may have been promoted since December 31, 1915, his increase will be based upon the rate of his present position as of December 31, 1915.

(5) As to the employee who has been reduced in position, his increase will be based upon the rate of his present position as of December 31, 1915.

(6) The new rates named herein, where they are higher than the rates in effect on January 1, 1918, will be applied to the occupants of positions that carried the rates in December, 1915.

(7) In those cases where increases have been made by the railroads since December 31, 1915, in excess of the amounts herein ordered, present wages shall apply, for in no instance shall the application hereof operate to reduce present rates of pay.

(8) Reductions in hours between December 31, 1915, and January 1, 1918, are not to be regarded as increases in pay.

(9) The wage increases provided for herein shall be effective as of January 1, 1918, and are to be paid according to the time served to all who were then in the railroad service or who have come into

such service since and remained therein. The proper ratable amount shall also be paid to those who have been for any reason since January 1, 1918, dismissed from the service, but shall not be paid to those who have left it voluntarily. Men who have left the railroads to enter the Army or Navy shall be entitled to the pro rata increases accruing on their wages up to the time they left, and the same rule shall apply to those who have passed from one branch of the railroad service or from one road to another.

(10) This order applies to foremen, chief clerks, and others employed in a supervisory capacity, as well as to their subordinates.

(11) This order shall be construed to apply to employees of railroads operating ferries, tugboats, lighters, barges, and any other floating equipment operated as terminal or transfer facilities, but shall not be construed as applying to railroad employees on cargo and passenger carrying equipment on lakes, rivers, or in coastwise or ocean traffic.

(12) The provisions of this order will not apply in cases where amounts less than $30 per month are paid to individuals for special service which takes only a portion of their time from outside employment or business.

(13) Office boys, messengers, chore boys, and similar positions filled by employees who are under 18 years of age will receive the following increase per month:

$20 increase per month where December, 1915, rate was from $30 to $45 per month.

$15 increase per month where December, 1915, rate was from $20 to $30 per month.

$10 increase per month where December, 1915, rate was less than $20 per month.

ARTICLE III.—RULES GOVERNING CONDITIONS OF EMPLOYMENT.

Section (a).—The basic eight-hour day.

The principle of the basic eight-hour day is hereby recognized. Where employees are paid upon a daily or monthly basis, the new compensation herein established will apply to the number of hours which have heretofore constituted the actual day's work. For example, where an actual day's work has been 10 hours, the new compensation will cover the 8 basic hours and 2 hours overtime. Additional overtime will be paid pro rata.

METHOD OF APPLYING BASIC EIGHT-HOUR DAY RULES.

(1) Position which in December, 1915, paid $2 per 9-hour day:

Old rate, $2 per day.

New rate, $2.51 for 8-hour basic day.

Overtime, 31.4 cents per hour.

New rate, $2.83 for 9-hour service; 83 cents increase.

(2) Position which in December, 1915, paid $2.40 per 10-hour day:
Old rate, $2.40 per day.
New rate, $2.70 for 8-hour basic day.
Overtime, $0.68—2 hours, at 34 cents per hour.
New rate, $3.38 for 10-hour service; 98 cents increase.

(3) Position which in December, 1915, paid $75 per month, working 10 hours per day for 26 working days:
Old rate, $75 per month.
New rate, $84.60 per month basic 8-hour day.
Overtime, $21.15—52 hours, at 40.67 cents per hour.
New rate, $105.75 for same service; increase, $30.75.

(4) Position which in December, 1915, paid $100 per month, working 11 hours per day for 31 working days:
Old rate, $100 per month.
New rate, $95.82 per month basic 8-hour day.
Overtime, $35.93—93 hours, at 38.64 cents per hour.
New rate, $131.75 for same service; increase, $31.75.

Section (b).—Rates of pay for overtime.

This order shall not affect any existing agreements or practices for the payment of higher rates of pay for time worked in excess of any standard day. Time worked in excess of the basic eight-hour day hereby established will, when there is no existing agreement or practice more favorable to the employee, be paid on a pro rata basis, as indicated in section (a) of this article.

Section (c).—No reduction in total increase.

Pending consideration by the Board of Railroad Wages and Working Conditions hereinafter provided for, no reduction in the actual hours constituting a day's work shall operate to deprive any employee, paid by the day or month, of the total increase in pay granted him by this order.

ARTICLE IV.—PAYMENTS FOR BACK TIME.

Each railroad will, in payments made to employees on and after June 1, 1918, include these increases therein.

As promptly as possible, the amount due in back pay from January 1, 1918, in accordance with the provision of this order, will be computed and payment made to employees separately from the regular monthly payments, so that employees will know the exact amount of these back payments.

Recognizing the clerical work necessary to make these computations for back pay and the probable delay before the entire period can be covered, each month, beginning with January, shall be computed as soon as practicable and, as soon as completed, payment shall be made.

ARTICLE V.—EMPLOYMENT OF WOMEN.

When women are employed, their working conditions must be healthful and fitted to their needs. The laws enacted for the government of their employment must be observed and their pay, when they do the same class of work as men, shall be the same as that of men.

ARTICLE VI.—COLORED FIREMEN, TRAINMEN, AND SWITCHMEN.

Effective June 1, 1918, colored men employed as firemen, trainmen, and switchmen shall be paid the same rates of wages as are paid white men in the same capacities.

Back pay for period January 1, 1918, to May 31, 1918, will be based only upon the increases provided in Article II of this order for such positions. Back payments will not apply to the further increased rate made effective by this article.

ARTICLE VII.—BOARD OF RAILROAD WAGES AND WORKING CONDITIONS.

There is hereby created a Board of Railroad Wages and Working Conditions which shall consist of the following members: J. J. Dermody, F. F. Gaines, C. E. Lindsey, W. E. Morse, G. H. Sines, A. O. Wharton.

This board shall at once establish an office at Washington, D. C., and meet for organization and elect a chairman and vice chairman, one of whom shall preside at meetings of the board.

It shall be the duty of the board to hear and investigate matters presented by railroad employees or their representatives affecting,

(1) Inequalities as to wages and working conditions whether as to individual employees or classes of employees.

(2) Conditions arising from competition with employees in other industries.

(3) Rules and working conditions for the several classes of employees, either for the country as a whole or for different parts of the country.

The board shall also hear and investigate other matters affecting wages and conditions of employment referred to it by the Director General.

This board shall be solely an advisory body and shall submit its recommendations to the Director General for his determination.

ARTICLE VIII.—INTERPRETATIONS OF THIS ORDER.

Railway Board of Adjustment No. 1 is authorized by Article 9 of General Order No. 13 to perform the following duty:

Wages and hours, when fixed by the Director General, shall be incorporated into existing agreements on the several railroads, and should differences arise between the management and the employees of any of the railroads as to such incorporation, such questions of difference shall be decided by the Railway Board of Adjustment No. 1, when properly presented, subject always to review by the Director General.

In addition to the foregoing, other questions arising as to the intent or application of this order in respect to the classes of employees within the scope of Railway Board of Adjustment No. 1 shall be submitted to such board, which board shall investigate and report its recommendations to the Director General.

Similar authority may be conferred on any additional railway board of adjustment hereafter created.

Decisions shall not be rendered by such boards until after approval by the Director General.

Prior to the creation of additional railway boards of adjustment to deal with questions as to the intent or application of this order as it affects any other class of employees, such questions, with respect to such employees, shall be presented to the Director of the Division of Labor, United States Railroad Administration, Washington, D. C.

W. G. McAdoo,
Director General of Railroads.

REPORT OF THE RAILROAD WAGE COMMISSION.

By an order of January 18, 1918, the Director General of Railroads, Mr. William G. McAdoo, created a Railroad Wage Commission and named as members thereof Franklin K. Lane, Secretary of the Interior; Charles C. McChord, member of the Interstate Commerce Commission; J. Harry Covington, Chief Justice of the Supreme Court of the District of Columbia; and William R. Willcox, of New York.

The duties of the commission were stated as follows:

> The commission shall make a general investigation of the compensation of persons in the railroad service, the relation of railroad wages to wages in other industries, the conditions respecting wages in different parts of the country, the special emergency respecting wages which exists at this time owing to war conditions and high cost of living, as well as the relation between different classes of railroad labor. The commission shall begin its labors at once and make report to the director general, giving its recommendations in general terms as to changes in existing compensations that should be made.

The commission organized immediately. Hearings were held in Washington. Representatives of the railroad employees and representatives of the railroads appeared before the commission. Much documentary evidence was submitted by persons appearing and by correspondents. In addition, through special representatives the commission made an extensive inquiry into the cost of living at the present time and for two years back, of wage rates on the railroads and in other industries, and of changes in railroad wage rates and working conditions in Europe during the War.

The report of the commission was submitted to the director general on April 30, and made public May 9. The commission was authorized only to make recommendations.

In general the recommendations of the commission were accepted by the Director General.[1] The principal points not in the commission's report that are incorporated in his order are: Recognition of the principle of the basic eight-hour day; in the case of machinists, boiler makers, blacksmiths, and other shop mechanics, who have been receiving the same hourly rate, a minimum of 55 cents per hour; and for common labor, a minimum of 2½ cents per hour over the rates paid as of December 31, 1917.

The suggestion made by the commission in its report that "in every case where the same service is rendered there should be the same pay without regard to sex or race," is adopted by the Director General.

TEXT OF THE REPORT.

APRIL 30, 1918.

TO THE DIRECTOR GENERAL OF RAILROADS:

To make an investigation of the wages and hours of the more than 2,000,000 railroad workers now in the employ of this Government has been a matter of engrossing interest. To ask of a man, "What wages should you in justice receive?" is to ask, perhaps, the profoundest of all human questions. He is at once compelled to an appraisement of his own contribution to the general good. He must look not selfishly on his own material needs, but take a far view of the needs of those dependent upon him. He must go into the whole involved problem of his relationship with his fellows, and to answer the question aright he must in the end come to a judgment which will be nothing less than a determination of what policy or plan of wage adjustment will make for the permanent well-being of the State. We have searched for no such ultimate answer, if there can be one. But our investigation sought to reveal the insistent problems that confronted these workers, and such recommendations as we make are the practical answers to an immediate and direct question: What does fair dealing at this time require shall be done for these people, who are rendering an essential service to the Nation in the practical conduct of this industry?

That question, to the mind of the commission, is qualified materially by the phrase "at this time." The existing state of war prohibits anything approximating a determination of ideal conditions. The exceptional call that has been made upon the railroads and upon practically all other forms of industry in the country since the United

[1] See order of Director General of Railroads, p. 1.

States entered the War over a year ago has created an abnormal demand for labor. Wages have always responded to a degree to the law of supply and demand. As a result of the War the prices of the necessities of life have been mounting to unheard-of levels. The railroads, with the pressure upon them for greatly increased transportation facilities, have been confronted with the problem of asking increased exertion on the part of labor at a time of extreme competitive labor demand and at a time when the purchasing power of the pay is shockingly small. The commission has consequently considered the railroad wage problem with the idea that the Government must courageously direct its attention toward the maintenance of rates of wages for the railroad employees which are still adequate for those who, as they patriotically labor, recognize that the War has brought to us all the necessity for sacrifice.

In understanding its comprehensive labor of determining in a broad spirit what fair dealing at this time does require to be done by the Government for the railroad employees, the commission held a large number of public hearings. It requested to appear before it at those hearings representatives of all classes of employees, organized and unorganized, in the service of the railroads. Those who came to speak for these employees were given a full opportunity to present their views concerning the character and conditions of the work performed by those for whom they spoke and the necessity for an increased compensation to be paid them. In addition to the statements presented at the hearings on behalf of the employees, hundreds of letters, written statements, and petitions which were sent to the commission by individual employees and by organizations of employees were classified, analyzed, and considered by the commission in connection with the oral statements. Men in the service of the railroads, who during the period of operation and control by the private owners thereof had directly to do with the work performed by the various classes of employees and with the determination of the rates of compensation and conditions of employment, were also heard, not in controversy with the employees, but to give all the information they could concerning the work of the various classes of employees, the reasons for the existing differentials in wages between different classes, the extent to which increases in wages had already been given to meet the present exigency, and the extent to which increases ought to be given at the present time.

WAGE DEMANDS.

The requests which have come to us for wage increases would, if fully granted, involve an additional outlay in wages of somewhat over $1,000,000,000 per year in excess of the wage fund of last year,

which exceeded $2,000,000,000. Some asked for an increase of 100 per cent in their pay, and from this they graduated downward to 10 per cent. None were satisfied with their present wages.

If we assume that this total sum should be given, the problem would at once arise as to its distribution. Quite evidently the need or the desert of each class of labor is not to be measured by its demands. The bolder should not be given all they ask merely for their boldness, while the more modest are insufficiently rewarded for the service they render because of their modesty. Some had evidently thought out their claims with particular respect to their power to compel concessions, while others based their demands upon the exceptional character of the services given, the long experience, and the training or character required. Still others found this a proper time to put forward claims which they felt were but a slender part of what justice would award were the whole scheme of wage making to be taken up afresh under a new order of things.

To reclassify the many hundreds of employments in which the 2,000,000 railroad workers engage would be a task calling for more time, skill, insight, and knowledge than we possess. At the outset, it was seen that there were grave inequalities in the rates of wages paid. But who should say what relationship each class of employees should bear to the other? Abstractly, why should an engineer receive $170 per month and a telegraph operator $90 per month? What ratio should the messenger boy's wage bear to that of a brakeman, or that of a machinist's helper to a section boss, or that of a billing clerk to a train dispatcher? Or, to be still more particular, what should be the proportionate wage of trainmen and station men? Should there, in fact, be, or could any scientific scheme be devised by which there might be arrived at, some proper and certain method of determining the wage of a carpenter as against that of an electrician? So, if the full amount of the claims were granted, we should still be met with a problem impossible of certain solution—the proportionate share out of the total wage fund that should go to anyone.

In the world of economics this situation has been met by the simple application of supply and demand, which is in turn now varied, affected, and modified by those limitations arising out of the artificial but necessary and historic methods of collective bargaining.

These forces have classified employments. In the growth of the railroads there has consequently been evolved no other plan for such classification and no scientific relationship between the wages paid. The proposal that a new classification should be attempted is one which, to say the least, may not be accepted now. Nevertheless, there stands out one dominating fact, recognized by railroad workers as well as by railroad officials—a conclusion compelled by that large

sense of equity which governs where logical processes fail—that the lower grades of railroad employment, those in which the supply of labor has been less restricted and where organization has been difficult, if not impossible, deserve wage increases out of proportion to the increases for those in superior grades.

In treating of different crafts, it is not without interest to recall that each of those workers who appeared made claim, with a quite manifest and very proper pride, that without his kind of labor the railroads could not be operated. And being essential to the large scheme, each asked that this pivotal nature of his work should be recognized in the wages paid. The train dispatcher spoke with enthusiasm of the large responsibilities that he bore, and he was followed by the section man, ready for call at every moment, a minuteman, without whom train dispatcher and train would alike be useless. So by slow steps as our inquiry proceeded we came to see that the only practicable way of dealing with a problem so indented with detail and so complex was to meet it on a large scale.

Should there be any increase in wages to these men in the railroad service? The railroads themselves have for the past two years been answering this question by yielding, some with a wise prevision, and others too slowly for their own good, to the requests of their employees. It took neither tables nor charts nor briefs to make evident that, if the roads were to hold those men they had, concession must be made to the imperious demand of rising prices for the staples of living.

Furthermore, an unprecedented call had come for men of certain trades in connection with the new industries that had been created by the war in Europe, and this long before our entry into the conflict. Machinists and ironworkers of all kinds found themselves to be essential to the great munition plants, and day labor of the most unskilled character rose into high demand. To meet this competition, the roads had advanced wages by slow steps at first and later more rapidly. It is hardly realized that the roads themselves have in two years, 1916 and 1917, increased wages approximately $350,000,000 per year if applied to the present number of their employees.

But these advances were not in any way uniform either as to employments or as to amounts or as to roads, so that one class of labor benefited much more than another on the same road, and as between roads there was the greatest divergence. The situation had been dealt with as pressure made necessary, and naturally those who by organization or through force of competition could exert most pressure fared best. Things came to a head just before the Government took over the railroads. Another three months of private

management and we would have seen much more extensive concessions in wages or there would have followed an unfortunate series of labor disturbances. The Government therefore has now to meet what would have come about in the natural course.

Indeed, the impatience of the men was only allayed, after Government intervention, by the assurance that the matter of wages would be promptly taken up and that the awarded increases would be retroactive as of January 1 of this year.

The Government now enjoys this position of distinction—it is not yielding to threats; it is not compelled to a course by fear of any unpatriotic outburst; it is not making concessions to avoid disaster. There has been no hint that such a policy would be pursued by those who have it within their power. The right thing "at this time," a measure of justice, consideration for the needs of the men, whether organized or unorganized, whether replaceable or not replaceable—these are the standards that we have sought to meet. By what amount have the railroad workers been disadvantaged by reason of the War, and how may that disadvantage be overcome with the largest degree of equity, assuming that, in common with all who do not wish to exploit the opportunities which the War affords, these workers can not have and will not expect a full meeting of the entire burden.

The course of first suggestion is to allow a uniform increase of so many dollars per month to each worker. This is the policy England has pursued, as is shown in Appendix I of this report. It has the advantage of simplicity; but to our minds it fails primarily in drawing the distinction between those whose need is greatest and those who have largest leeway for sacrifice. To make a uniform wage increase of, say, $20 per month, would increase the railroad budget by nearly $500,000,000 a year. It would be a boon to many whose wages are low, but in its uniformity, it would fail to adapt itself to the varying needs of those whom it is intended to serve.

We have had a most exhaustive study made of the cost of living to-day as contrasted with the cost of living in the latter part of 1915, when by the reaction of the European War the American people first felt keenly the increase in the burdens of life and the need for higher wages. This study has been made without reference primarily to those quite thorough investigations which have been carried on by the Department of Labor, other governmental, and many private agencies. And to our minds it conclusively establishes two things: (1) that the cost of living has increased disproportionately among those of small incomes, and (2) that there is a point up to which it is essential that the full increased cost shall be allowed as a wage increase, while from this point on the increase may be gradually diminished. (See Appendix II, p, 37.)

This study of the cost of living was not made from paper statistics exclusively, by the gathering of prices and comparisons of theoretical budgets. It was in no inconsiderable part an actual study from life, one of the most interesting and valuable groups of figures having been gathered by the newspapers of the country, by interviews with those of the working class, and the inspection of their simple books of accounts. Roughly, it may be said that the man who received $85 a month on January 1, 1916, now needs 40 per cent additional to his wage to give him the same living that he had then. Below that wage a larger percentage must be allowed, because the opportunity for substitution and other methods of thrift decline almost to a vanishing point, while above that wage a growing proportion of the increase will go to those things essential to cultured life, but nonessential to actual living.

In fairness, therefore, a sufficient increase should be given to maintain that standard of living which had obtained in the prewar period, when, confessedly, prices and wages were both low. And upon those who can best afford to sacrifice should be cast the greater burden.

Another argument that is compelling as against the uniform increase in existing wages is the unalterable fact that to give an equal amount now to all would be giving to some a double increase, that which they had received from the railroads during the last two years and that which the Government might award. For not all of the railroads made increases to the same classes, and no two made awards in the same percentages, even within the same groups of employments. The line of increases drawn upon a chart looks like a deeply serrated mountain chain. To add to all uniformly would be but to accentuate the inequalities resulting from the promptness of some roads as against the backwardness of others in meeting their workmen's needs.

There is high authority for saying that "to him that hath, shall be given, but from him that hath not shall be taken away even that which he hath." This dictum as to the way of the world we take to have been the recognition of a fact, not the indorsement of an ideal. And the plan we recommend is an expression of the reverse policy. We take from no man that which he hath, insuring him as much as he has now (for no wages are to be lowered), but we would add materially to the fund of those who have least. And of these there are many. It has been a somewhat popular impression that railroad employees were among the most highly paid workers. But figures gathered from the railroads disposed of this belief. Fifty-one per cent of all employees during December, 1917, received $75 per month or less. And 80 per cent received $100 per month or less. Even among the locomotive engineers, commonly spoken of as highly

paid, a preponderating number receives less than $170 per month, and this compensation they have attained by the most compact and complete organization, handled with a full appreciation of all strategic values. Between the grades receiving from $150 to $250 per month there is included less than 3 per cent of all the employees (excluding officials), and these aggregate less than 60,000 men out of a grand total of 2,000,000. (See Appendix III.)

The greatest number of employees on all the roads fall into the class receiving between $60 and $65 per month—181,693; while within the range of the next $10 in monthly salary there is a total of 312,761 persons. In December, 1917, there were 111,477 clerks receiving annual pay of $900 or less. In 1917 the average pay of this class was but $56.77 per month. There were 270,855 section men whose average pay as a class was $50.31 per month; 121,000 other unskilled laborers whose average pay was $58.25 per month; 130,075 station service employees whose average pay was $58.57 per month; 75,325 road freight brakemen and flagmen whose average pay was $100.17 per month; and 16,465 road passenger brakemen and flagmen whose average pay was $91.10 per month. (See Appendices III and IV, pp. 42, 43.)

These, it is to be noted, are not prewar figures; they represent conditions after a year of war and two years of rising prices. And each dollar now represents in its power to purchase a place in which to live, food to eat, and clothing to wear but 71 cents as against the 100 cents of January 1, 1916. That there has been such steadfast loyalty to the railroads and so slight a disposition to use the lever of their necessity and their opportunity to compel by ruthless action an increase of wages is not without significance and should not be passed without public recognition.

With the various conditions which have been detailed all in mind the commission has reached the conclusion that the fairest method of dealing with the problem of wage increases is to award increases on the following scale:

[The scale of wage increases is given in the order promulgated May 25, 1918, by the Director General of Railroads, pp. 1 to 21, and is therefore not reproduced here.]

In applying the increases prescribed in the preceding tables to the wages of men paid on a monthly basis, the roads will substitute for each group of monthly wages of 1915, as listed in column 1, the amount named in column 4, on the same line.

The inclusion of the percentages contained in column 2 is merely to explain the method of arriving at the amounts contained in column 3, which, added to the maximum amount for each group named in column 1, produces the "new rate per month" shown in column 4, on the same line.

Application of these new wages to the present pay rolls of the railroads, as nearly as may be, indicates that the net wage increases granted will approximate $300,000,000 a year. The magnitude of this amount is not staggering when the whole expenditure for wages on the railroads is considered. And whatever its effect upon the mind may be, we regard such an expenditure as necessary for the immediate allaying of a feeling that can not be wisely fostered by national inaction, and as not one dollar more than justice at this time requires. It will make hard places smoother for many who are now in sore need. It gives no bounty. It is not a bonus. It is no more than an honorable meeting of an obligation.

APPLICATION OF THE SCALE.

These increases are to be applied to the rates of wages in effect on December 31, 1915. They do not represent a net increase at this time. Because our figures as to the increase of living costs have been gathered with reference to the two-year period, January, 1916–April, 1918, the wage increases are reckoned with respect to the same dates. The telegrapher who holds the same position to-day that he did the last day of December, 1915, and who then received $75 a month and has received no increase since, will receive an additional wage of $30.75 per month. If he has received an increase in these two years of $10 per month, the recommended increase of his wage will be cut down by that much, making his net advance $20.75. The section hand who on December 31, 1915, received a wage of $50 per month will receive an increase of $21.50 per month, less whatever his monthly wage as section man may have been advanced in the intervening two years.

In the application of the scale the wage runs with the place. If in the past two years an employee has been promoted, his new wage is based upon the rate of increase applicable to the new schedule governing the new place.

Reductions in hours are not to be regarded as increases in pay. This rule is made necessary, first, by its justice, for it is not to be contemplated that hours are reduced to decrease earnings; and, second, by the impracticability of applying any other rule. In some cases the decrease in daily hours did effect an increase in total wages paid, by reason of overtime, but in other cases, where the railroads adjusted themselves to an eight or a nine-hour day, there was no increase in the monthly compensation. To differentiate between these cases would be an interminable task. Moreover, we assume the good faith of all reductions in hours as being what they pretend to be.

There are some few cases where the roads, by reason of abnormal conditions, largely local, and arising out of the extreme competition in certain trades, have granted wage increases which will well-nigh cover, if not altogether cover, the increases here made. As to those

who have received such increases, we advise no other course than that the scale be adhered to, for it has its foundation in principle and not in the compelling force of any unusual competitive conditions. In no event, however, should there be any reduction in wages from those now obtaining.

The railroads must, however, maintain their complement of workers and if, by meeting fairly, as here, the needs of the time, this end can not be secured, there must be allowed play for other forces than those we have recognized.

In the application of the scale, that percentage of increase is to be applied which is awarded to the normal time wages paid to the individual in each position in the railroad service on December 31, 1915. There are, however, employees of certain classes, and upon a number of roads, whose wages are paid upon a piecework basis, and there are also numbers of employees on practically all the roads whose hours of service at times run beyond the straight hours of service established for a day's work of the kind they perform. A practical plan for wage increases, in harmony with the scale, has been devised for application to piecework wages and wages for recognized overtime.

While the method of increasing wages here devised is manifestly one of simplicity when applied to the straight schedules of hourly, daily, or monthly pay, we have found much difficulty in adapting the plan to the elaborate and intricate schedules of the trainmen, from which there is apparently no desire on the part of the railroad operators or the trainmen to depart. This, however, we have succeeded in doing in such manner as to translate the increases into mileage rates, thus maintaining the existing schedules relating to the method of pay. Accepting the average monthly earnings of employees in the train and engine service for the fiscal year ended 1915 as accurately reflecting the rates paid to those classes, we have adopted, as the percentage of increase to be applied to the mileage rates obtaining for the several classes of trainmen, that percentage of increase which is awarded to employees generally whose earnings are equal to the average earnings of each of the several classes of trainmen. Thus, in the case of road passenger engineers, their average earnings in 1915 were $178.46. The individual employee in any other branch of the railroad service whose monthly wage is $178.46 will receive a wage increase of 11¼ per cent, and the road passenger engineers as a class will receive an increase of 11¼ per cent in their existing mileage rates. And the same method obtains for each of the classes of trainmen paid on the mileage basis.

HOURS OF SERVICE.

At the outset of the hearings it was manifest that the matter of hours of service is lodged deep in labor's mind. A standard day of reasonably limited length is as much a part of the measure of justice with the workingman as is his rate of wage.

Slowly and steadily, by force of law somewhat, but also by the voluntary act of the employers, a shorter workday is being put into effect. This tendency will continue, and the shorter day will come to be regarded, not as a means of minimizing the returns which the worker gains, but as a conserver of the human material upon which industry rests. This matter of worktime must be submitted to the pragmatic test. Society will come to see that there is a maximum which is beyond the Plimsoll mark of wisdom, and a minimum that makes society in many ways the sufferer. The line of moderation, the medial line, is one that must be proved by experience. The wise employer will look with sympathetic eye to find it, and the wise employee will attempt in good faith to make it manifest. It would be a splendid achievement if we could at this time crystallize the experience of the world into a conclusion concerning the length of the workday that would be of universal application. But this is not possible now for many reasons, not the least of which is an insufficiency of data touching so many and such diverse employments which call for such differing strains upon human nerves and muscles.

This, moreover, is not the time, in the judgment of the commission, to make experiments which might lessen the output of that commodity which railroad men produce—tons of freight hauled and numbers of passengers carried. The one thing now imperative is volume of and speed in railroad output. Since the commission's work began, as before, our needs as a nation, and the vital needs of those nations with whom we are allied, have been imperiled by the shortcomings of our transportation system. There is no one who wishes to risk a repetition of this condition. On the contrary, all desire that naught shall be done which will make it likely.

The railroad employees have asked for the shorter day, saying frankly that they did not wish an increased rate for overtime save as a means of compelling the observance of shorter hours—a penalizing of the employers for too long a work day. At this time, however, when urgent and serious necessity compels sacrifice from all, to penalize the Government for working its men as long as they have been in the habit of working under their private employers—the railroad companies—is to take advantage of the twofold embarrassment of the Government—its need for the work and its inability to call in outside men. The commission does not believe that the railroad

employees really want thus to hamper the transportation facilities of the country in its hour of need.

Manifestly, therefore, at this time, when men must be constantly taken from the railroads, as from all other industries, to fill the growing needs of the Nation's Army, hours of labor can not be shortened and thereby a greater number of men be required for railroad work. The Nation can not, in good faith, call upon the farmers and the miners to work as never before and press themselves to unusual tasks, and at the same time so shorten the hours of railroad men as to call from farm and mine additional and unskilled men to run the railroads. While the commission is strongly disposed to a standard day, in so far as the nature of the service will permit it, its firm judgment consequently is that the existing hours of service in effect on the railroads should be maintained for the period of the War.

But with this we earnestly urge that a most exhaustive study be made of this matter of hours of service, not with a view to the adoption of some arbitrary and universal policy which shall have no regard to the kind of work done, or to the effect upon the railroad service, but with these very considerations in mind. And we have gone into this matter far enough to justify to ourselves the belief that by the steady application of such sympathetic consideration, the railroad service may be improved and at the same time fuller opportunity be given for lifting a burden that falls disproportionately upon some of the less favored of the railroad workers. The foundation for such a study may be found in the charts constituting Appendix VII of the report.

OVERTIME PAY.

Closely allied to the matter of hours of service is that of extra pay for overtime. In fact, the whole theory of those who speak for labor is that extra pay for overtime is the logical way to force the standard day of reasonable hours, with no work thereafter. In that theory there may or may not be force; but quite apart from such view, certain it is that in harmony with the broader idea that fair hours of rest and recreation are the laborer's right the use of those hours in industry may well be obtained only at a wage much above the normal. With overtime as with hours of service, however, the commission believes that the existing rules and conditions of payment should not be disturbed during the period of the War. But at the time when the study of the matter of hours of service is made that study must sympathetically cover also the broad and kindred field of compensation for the overtime which is necessary in certain classes of service.

APPRENTICES.

Organized labor realizes that at a time when men are being speeded up in the colleges by being given special courses in chemistry and other scientific subjects necessary for war work, the rules of inhibition touching the term of apprentices must be liberalized so that those who are competent shall the more quickly be enabled to place their full skill at the Nation's service. It is the view of the commission that the full measure of the increases herein suggested shall go only to those above 21 years of age, and that those from 18 to 21 years shall have three-fourths of such increases, and those under 18 one-half of such increases. This rule, however, might well be modified to this extent, that if apprentices are graduated into the *full* status of journeymen before they have reached 21 years, they shall have the *full* pay of this new status.

FLOATING EQUIPMENT EMPLOYEES.

This award shall be construed to apply to employees of railroads operating ferries, tugboats, lighters, barges, and any other floating equipment operated as terminal or transfer facilities, but shall not be construed as applying to railroad employees on, or in connection with the operation of cargo and passenger carrying equipment on lakes, rivers, or in coastwise or ocean traffic.

WAGE ADJUSTMENTS BY OTHER BOARDS.

The award of the commission shall not be applicable to those employees whose compensation is the result of adjustments by or through any agency established for the purpose by the Navy Department, the War Department, the Department of Commerce, the United States Shipping Board, or any other Government agency created since the entry of the United States into the War.

EFFECTIVE DATE OF INCREASES.

The wage increases provided for in the scale shall be effective as of January 1, 1918, and are to be paid to all who were then in the railroad service or who have come into such service since and remained therein, according to the time served. The proper ratable amount shall also be paid to those who have been for any reason since January 1, 1918, dismissed from the service, but shall not be paid to those who have left it voluntarily because remaining in the service was the consideration of the promise to make the increases effective from the date mentioned. Men who have left the railroads to enter the Army or Navy shall be entitled to the pro rata increases accruing on their wages up to the time they left, as they have continued in the service of the Nation. The same rule shall apply to those who have

passed from one branch of the railroad service or from one road to another.

The increases as to the employees of any road shall be effective only from the time the railroads were taken over by the Government.

EMPLOYMENT OF WOMEN.

The employment of women is one of the important problems confronting those in charge of the actual operation of the railroads. Up to the time of the abnormal demand for labor created by the European War, women were not extensively employed by the railroads except as stenographers and clerks in the offices, and as charwomen, car washers and cleaners, and other employments of like character. Since the War they have entered the shops, have engaged in handling freight and baggage, and have even been employed upon the tracks. Much of this work requires a physical effort beyond the strength of women, and some of it is carried on under conditions menacing to health, safety, and morals.

The labor in our shops and elsewhere must be diluted as the War takes to itself an increasing number of men. Women must, to some degree, take these places. They should be cared for. Their burden should not be such as to hazard their health. Their hours should be reasonably short. Their working conditions should be healthful and fitted to their needs. And their pay, when they do the full work of men, should be the same as that of men.

Nearly all the States have laws which restrict the hours of service of women. The exigency of war work is not so great that the railroads should be permitted to employ women except under the restrictions of those laws and in classes of service comprehended by them unless the restrictions prescribed by the laws are extended to the service and all proper moral and sanitary surroundings are provided.

DISCRIMINATION AGAINST EMPLOYEES.

The investigation of the commission disclosed many inequalities of pay in the same branch of service, not only as between different sections of the country but in the same section. The attention of the railroad managers should be directed to these inequalities, with a view to removing them whenever the discrimination is not justified by differences in the efficiency of the labor, the cost of living, or other conditions legitimately affecting the rate of wages. In every case where the same service is rendered there should be the same pay without regard to sex or race.

Members of organizations and nonmembers must stand upon the same footing. In some branches of the service, and this is peculiarly true of those least paid, there are no organizations, or if any, they are

limited in their membership and restricted in their locality. But whether organized or unorganized, the purpose must be duly to consider every branch of the service and to accord fair treatment to all.

SALARIES OF OFFICIALS.

In carrying out the direction to the commission to "*make a general investigation of the compensation of persons in the railroad service,*" the investigation obviously included a consideration of the compensation of those persons who are classed as officials. The commission, therefore, by an individual "questionnaire" which all officials were required to answer, and also by a report obtained from each railroad, secured the names of all persons receiving a compensation of $5,000 and upward, together with a full statement of the services performed by each of them.

The total compensation for the year ending December 31, 1917, paid to such officials is approximately $30,000,000. The individual salaries varied from $5,000 to $100,000. It is reasonably certain from the facts gathered by the commission that a substantial readjustment of such salaries may be made and the efficient operation of the railroads promoted thereby. Such readjustment of salaries, however, presents an individual proposition as applicable to each official. Some salaries may well be abolished altogether, others greatly reduced, while in some cases of lesser paid officials an increase would be warranted.

The commission recommends that during the period of Government conduct of the railroads, no salaries paid to officials who are not essential to the operation of the roads shall be charged as part of the operating expenses, and that a careful study be made of the proper relation between the salaries of the higher officials and those of their subordinates with a view to readjustments in the interest of the highest efficiency of the service.

PERMANENT WAGE TRIBUNALS.

There should be constituted a tribunal or tribunals to continue the study of railroad labor problems, composed, in part at least, of men experienced in this kind of work, for as to these problems there can be no finality. Conditions are ever changing and new adjustments must from time to time be made, and there should always be an existing tribunal authorized to take present appropriate action. Many complaints have been made to us by individuals and groups of men which it was impossible for us to investigate, and which should be investigated and redress afforded if the complaints are well founded. Among these are differences of pay where there are no, or only negligible, differences in the services rendered. Conditions of employ-

ment are described which, if the descriptions be true, demand amelioration. A commission for each of the general divisions of the railroad system would undoubtedly be fully occupied for a long time in dealing with such matters. In the meantime, the managers or other officials operating the several roads could do much to improve the situation by dealing with the conditions on their respective roads.

It would be impossible to magnify the importance of the American system of railroads in the conduct of this War. The country is vast, and has been developed upon a plan which makes each section dependent upon all others. In no other one particular are we so truly interdependent as in our industrial life. No one section lives to itself alone, and none of our great industries draws its materials from the vicinage or finds its markets near at hand. In a word, our industries are national in an uncommon sense. The steel that is fabricated into a shell in Pennsylvania comes from Minnesota, and the copper from Montana. The spruce struts that support the wings of our aeroplanes grow in Oregon, while the cotton which covers the wings comes from the South. These will serve to make clear how entire is our dependence upon the railroads and those who operate them.

That England should want for bread because American railroad equipment was unwisely distributed, or unnecessarily immobile, is a thing not to be explained to the Englishman, who regards our system of railroads and our methods of railroading as the model for the world, excelling either public or private systems elsewhere.

For our needs and for our pride this standard of superiority must be maintained, and to this end no other one thing will so greatly conduce as wisdom and justness in dealing with the actual workers on the roads. What has been here done is perhaps all that can be done now. The spirit which prompted the commission should not be permitted to languish or to flatten out into expansive inefficiency. The labor problem is never one exclusively of wages or hours. When it does become no more, then the human element has gone out of the management, it has become too remote in space or in spirit to make good. The table of wage increases presented in this report we urge should be construed in the largest spirit of liberality, so as to draw forth from the men a recognition of that sense of reciprocity which it speaks—good wages for good service. The policy comes from above; its sympathetic application must be left to those below.

We desire in closing this report to express our most sincere appreciation of the services rendered to the commission by Frederick W. Lehmann, as counsel; by William A. Ryan, as secretary; by Edward J. Barcalo, Riley L. Redpath and Lathrop Brown, as the board of examiners; and by William A. Hathaway, J. C. Bowen, Charles P.

Neill, Fred A. Burgess, A. O. Wharton and C. W. Hillman, as special statisticians.

Respectfully submitted.

FRANKLIN K. LANE.
CHARLES C. MCCHORD.
J. HARRY COVINGTON.
WILLIAM R. WILLCOX.

APPENDIXES.

There are 10 appendixes attached to the report. Those which seem the more vital to an understanding of the report are reproduced below in whole or in part.

APPENDIX II.—COST OF LIVING DURING 1917 AND 1918 COMPARED TO PREWAR PERIOD.

The commission instituted an exhaustive inquiry reaching into all parts of the United States. It sent special agents into various sections of the country to gather original data respecting the existing increase in the cost of living. A canvass was also made by many newspapers of the country among the working classes, and the data thus obtained, together with information gathered and submitted to the commission by those who spoke on behalf of the employees, was compiled by the Bureau of the Census under the supervision of Special Statisticians W. A. Hathaway and J. C. Bowen. That compilation and the records of the Bureau of [Labor] Statistics of the Department of Labor form the basis of the attached report, wherein the statistical information respecting the existing cost of living in America thus assembled is summarized and analyzed.

APRIL 25, 1918.

SIR: Supplementing our report on the increase in the cost of living based on relative price changes, submitted March 14, 1918: In view of the further rise in prices, particularly house rents and clothing, and making allowance for substitutions referred to in the report under the caption "Limitation of the results," we believe that the per cent increase for the different income groups from December, 1915, to date is about—

	Per cent.
For incomes up to $600	43
For incomes from $600 to $1,000	41
For incomes from $1,000 to $2,000	40

Respectfully,

W. A. HATHAWAY.
J. C. BOWEN.

To Hon. FRANKLIN K. LANE,
Chairman, Railroad Wage Commission,
Washington, D. C.

WASHINGTON, D. C., *March 14, 1918.*

SIR: We submit herewith a final report [1] covering two independent investigations, made especially for and at the direction of the commission, of the increase in the cost of living during the present War. The report is in two parts: Part I—Relative price changes; Part II—Family budgets.

Since there was no material rise in prices until the latter part of 1915, the investigations were confined to the period 1915–1917.

Respectfully,

W. A. HATHAWAY,
J. C. BOWEN,
Special Statisticians, Railroad Wage Commission.

To Hon. FRANKLIN K. LANE,
Chairman, Railroad Wage Commission.

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[1] See communication of Apr. 25, 1918, printed above. A part of the data in this report of Mar. 14 was submitted at an earlier date.

Part I.—Relative price changes.

Relative prices.—The increase in the various items of the family budget from January 1, 1916, to January 1, 1918, were ascertained to be:

	Per cent.
Food	52
Rent	10
Clothing	44
Fuel and light	31
Sundries	35

Appended Table 1 shows these increases by the three official classification territories of the Interstate Commerce Commission and compares them with the increases shown by other recent studies.

Combined weighted averages.—Weighting the above increases according to the proportion of expenditure for each item for different sized incomes gives the following combined per cents of increase:

	Per cent.
Families with incomes up to $600	[1] 40
Families with incomes from $600 to $1,000	38
Families with incomes from $1,000 to $2,000	37

Limitation of the results.—The above figures show how much more it would have cost to live on January 1, 1918, than on January 1, 1916, provided the standards of living remained the same. They may, however, fall short of showing the true increases by as much as 4 or 5 points, for the following reason: It is impossible to determine accurately the relative increase in the cost of living, even in normal times, and more difficult when prices are rising rapidly, at which time cheaper articles are substituted by both the producer and consumer. This is an inherent difficulty in all such studies and can not be entirely overcome by any statistical methods. In view of this, the figures should be interpreted as conservative and applied in a general rather than in a precise way.

Purchasing power of the dollar.—On the basis of a 40 per cent increase in the cost of living, the purchasing power of the workingman's dollar is 71 cents. Statements have occurred frequently in the press of late that the purchasing power of the dollar is now only 50 cents, compared with prewar times. This is based on a 100 per cent increase in wholesale commodity prices (Bradstreet and Dun indices) which is not a true measure of the increase in cost of living.

Variation by localities.—Although there was considerable variation in the relative prices for the various items, as between the three Interstate Commerce Commission territories (Table 1), the per cents of increase for all items combined showed such slight differences that they were disregarded.

Weights used.—Table 2 shows the weights, i. e. the proportion of expenditures for each item used in arriving at the combined per cents of increase. Similar figures of other well-known budgetary studies are shown in comparison.

Sources of basic data and methods of compilation.—Food: The United States Bureau of Labor Statistics retail price quotations on 22 articles of food were used. These are monthly quotations secured from 42 large cities in different parts of the country. This commission computed the index number for the individual cities, and combined the cities into Interstate Commerce Commission classification territories of eastern, southern, and western. The indices for the three territories were combined into a United States index by weighting each according to ratio of population in each territory.

[1] The per cents for specified incomes under $600 would be incomes up to $200, 42 per cent; $200 to $400 41 per cent; and $400 to $600, 40 per cent.

Rent: The commission collected[1] its own figures on house rents, first by direct inquiries to real estate agents in the 42 cities mentioned under "Food"; and second, by field investigations of its own agents. These inquiries indicated that the rise in rents had just begun during the latter part of 1917. The increases in each territory were combined into United States totals by weighting according to population. Appendix A shows the form used.[2]

Clothing: Prices on clothing were also secured[1] by the commission by direct inquiries to retail merchants in the 42 large cities. Price quotations on the various classes of articles of male and female wearing apparel were secured for December, 1915, and December, 1917. The quotations were combined by weighting each class according to the proportion of expenditure for each. The ratios for each territory were combined into United States ratios by weighting according to population. See Appendix B for forms used,[2] which also shows the weights used for each class of apparel. On account of the substitution of cheaper grades of articles, especially woolen apparel, the increase of 44 per cent shown for all clothing is believed to be low.

Fuel and light: The retail price quotations on anthracite and bituminous coal, secured by the United States Bureau of Labor Statistics in January of each year from the 42 large cities, were used. No increase was assumed for gas or electricity. These quotations were checked against reports of the United States Fuel Administration. The price quotations for bituminous coal were used for the southern and western territories; a weighted average of anthracite and bituminous for the eastern territory. Territorial ratios were combined into United States totals by weighting according to population.

Sundries: The increase in each important item of this sundry group was ascertained in various ways. Increases on amusements, travel, liquors, tobacco, postage, etc., stipulated by the recent war tax law were applied. Special inquiry was made of large retail drug stores for drugs and medicines. The remaining items were arbitrarily estimated; no increase was allowed for some items. The increases for each item were combined by weighting according to the proportion of expenditure for each, as shown in the United States Bureau of Labor study of 1901, somewhat adjusted to meet present conditions. No attempt was made to differentiate between the three Interstate Commerce Commission territories. The following shows the increase for each item and the weights used:

Item.	Per cent of increase, 1915–1917.	Weights.
Insurance	5	14
Organization dues	0	10
Religion and charity	0	6
House furnishing	[3] 40	13
Books and papers	50	4
Amusements and vacations	15	10
Liquors and tobacco	75	15
Sickness and death	[4] 50	11
All other	50	17
Total	35	100

[1] The commission was assisted in collecting the data on house rents and clothing by the United States Chamber of Commerce.
[2] The forms are not here reprinted.
[3] From Philadelphia study of United States Shipping Board.
[4] Doctors' bills, medicines, etc.

TABLE 1.—COMPARISON OF RELATIVE INCREASE IN SPECIFIED ITEMS OF EXPENDITURE AS DETERMINED BY FOUR INDEPENDENT STUDIES.

Item.	Jan. 1, 1916, to Jan. 1, 1918.				Jan. 1, 1916, to Jan. 1, 1918.	June, 1916, to Feb., 1918.	Year 1915, to year 1917.
	Railroad wage commission.				United States Bureau of Labor Statistics (Philadelphia, Pa., study for Shipping Board).	United States Shipping Board (Pacific coast study).	Family budgets collected by railroad wage commission.[1]
	Eastern territory.	Southern territory.	Western territory.	United States.			
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Food	52	56	47	52	51	52	40
Rent	15	5	7	10	3	16	10
Clothing	43	50	41	44	46	74	29
Fuel and light	37	25	27	31	23	49	35
Sundries	35	35	35	35	40	35	15

[1] These are not true relative increases, but are some indication of the substitution and economies practiced with respect to "food," "clothing," and "sundries." (See Pt. II.)

TABLE 2.—COMPARISON OF VARIOUS FAMILY BUDGETS, PERCENTAGE OF EXPENDITURE FOR SPECIFIED ITEMS, BY INCOME GROUPS.

Source.	Year.	Number of families.	Food.			Rent.			Clothing.		
			Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.	Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.	Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.
Railroad Wage Commission	1915	265	51	42	35	17	20	20	13	14	16
U. S. Shipping Board (Pacific coast study)	1917	.....	.....	.....	41	.....	.....	17	.....	.....	16
U. S. Bureau of Labor Statistics (Philadelphia study)	1917	512	.....	.....	43	.....	.....	12	.....	.....	16
Chapin (N. Y.)	1907	391	44	44	45	26	21	20	12	14	15
U. S. Bureau of Labor	1901	11,156	46	41	37	19	17	17	12	14	16
More (N. Y.)	1905	200	50	46	40	22	19	18	9	10	11

Source.	Year.	Number of families.	Fuel and light.			Sundries.			Total expenses.		
			Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.	Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.	Incomes up to $600.	Incomes $600 to $1,000.	Incomes $1,000 to $2,000.
Railroad Wage Commission	1915	265	6	7	6	13	17	23	100	100	100
U. S. Shipping Board (Pacific coast study)	1917	.....	.....	.....	7	.....	.....	19	100	100	100
U. S. Bureau of Labor Statistics (Philadelphia study)	1917	512	.....	.....	5	.....	.....	24	100	100	100
Chapin (N. Y.)	1907	391	6	5	4	12	16	16	100	100	100
U. S. Bureau of Labor	1901	11,156	6	5	5	17	23	25	100	100	100
More (N. Y.)	1905	200	6	5	5	13	20	26	100	100	100

NOTE.—These ratios were used in arriving at the combined per cents of increases for all items of family expenditures, from January 1, 1916, to January 1, 1918, as given in Part I. See also Table 4 of Part II. The ratios for specified incomes under $600 were taken from the United States Bureau of Labor report of 1901, adjusted to bring up to date. These per cents as adjusted were—

Income.	Food.	Rent.	Clothing.	Fuel.	Sundries.	Total.
Up to $200	57	15	10	7	11	100
$200 to $300	55	16	10	7	12	100
$300 to $400	53	17	11	7	12	100
$400 to $500	52	17	12	7	12	100

Part II.—Family budgets.

Family budgets giving incomes and expenses in detail for the calendar years 1915 and 1917 were secured by the commission through newspaper editors in selected cities in different parts of the country. The results furnished fresh data on the proportion of expenditures for each main item of the family budget, and also threw some light on the relation of expenses to income in 1915 compared with 1917. Appendix C shows the form of questionnaire used.

Table 3 gives a brief summary of the results and Chart No. 1 illustrates the relation of expenses to income. These results must be used with caution, since they are at best nothing more than a composite of careful guesses, as very few families keep trustworthy records. The "annual income" shown for the different territories and income groups must not be accepted as showing a differential in wage scales. The variation is purely accidental due to the varying size (income) of families selected by the editors. The amount of "surpluses" and "deficits" should be interpreted as tendencies rather than precise amounts or relationships.

Table 4 shows the per cent distribution of total expenses by objects of expenditure. These ratios are generally consistent with other budgetary experience. (See Table 2 of Part I.)

Table 5 gives the per cent increase in the total income and total expenses reported for 1915 and 1917. For all of the 265 budgets combined the increase in income was 10 per cent for the smaller income group and 14 per cent for the larger, compared with 27 per cent increase in expenses for each group. The increase for expenses is not as large as the known increases in relative prices for the various items that enter into the family budget (see Table 1, Part I), and a comparison of the two gives some indication of the economies and substitutions practiced.

Table 6 is a detailed summary of the absolute figures shown by the 265 budgets with the computed ratios and averages.

TABLE 3.—SUMMARY OF RESULTS OF 265 FAMILY BUDGETS COLLECTED BY RAILROAD WAGE COMMISSION.[1]

[Results shown are averages per family.]

Interstate Commerce Commission territory.	Income group.[2]	Number of families.	Annual income.		Annual expenses.		Net surplus or deficit.		Number of families reporting.			
			1915	1917	1915	1917	1915	1917	Surplus.	Deficit.	Surplus.	Deficit.
Eastern	1	62	$698	$792	$720	$944	[3] $22	[3] $152	27	31	7	52
	2	49	1,269	1,451	1,150	1,469	119	[3] 18	41	8	24	23
Southern	1	8	822	903	716	914	106	[3] 11	5	2	5	2
	2	24	1,376	1,507	1,224	1,508	152	[3] 1	18	3	11	12
Western	1	50	787	837	741	900	46	[3] 63	23	17	12	30
	2	72	1,234	1,422	1,111	1,412	123	[3] 10	55	12	37	31
Total, United States.	1	120	743	818	728	924	15	[3] 105	55	50	24	84
	2	145	1,269	1,446	1,143	1,447	127	[3] 1	114	23	72	56
Total	1 and 2	265	1,031	1,162	955	1,210	76	[3] 48	169	73	96	140

[1] A chart based on these figures is here omitted.
[2] Income group No. 1 comprises families with incomes up to $1,000; income group No. 2 comprises families with incomes from $1,000 to $2,000.
[3] Deficit.

TABLE 4.—PER CENT DISTRIBUTION OF TOTAL EXPENSES OF 265 FAMILY BUDGETS COLLECTED BY RAILROAD WAGE COMMISSION.

Interstate Commerce Commission territory.	Year.	Food.		Rent.		Clothing.		Fuel and light.		Sundries.		Total.	
		Income group 1.[1]	Income group 2.[2]	Income group 1.[1]	Income group 2.[2]	Income group 1.[1]	Income group 2.[2]	Income group 1.[1]	Income group 2.[2]	Income group 1.[1]	Income group 2.[2]	Income group 1.[1]	Income group 2.[2]
Eastern	1915	44	35	20	20	13	16	6	6	17	23	100	100
	1917	48	38	17	17	13	17	7	6	15	22	100	100
Southern	1915	51	35	18	21	14	15	5	5	12	24	100	100
	1917	54	39	14	18	15	16	5	5	12	22	100	100
Western	1915	40	35	21	20	14	16	8	6	17	23	100	100
	1917	46	39	17	18	14	16	8	7	15	20	100	100
		1915	1917	1915	1917	1915	1917	1915	1917	1915	1917	1915	1917
Total, United States		38	42	20	17	15	15	6	7	21	19	100	100
Income up to $600		51	56	17	17	13	11	6	6	13	10	100	100
Income $600 to $1,000		42	46	20	17	14	14	7	7	17	16	100	100
Income $1,000 to $2,000		35	39	20	18	16	16	6	6	23	21	100	100

[1] Comprises families with incomes up to $1,000. [2] Comprises families with incomes $1,000 to $2,000.

TABLE 5.—PER CENT OF INCREASE, 1915 TO 1917, 265 FAMILY BUDGETS COLLECTED BY RAILROAD WAGE COMMISSION.

Interstate Commerce Commission territory.	Per cent of increase in—			
	Annual income.		Annual expenses.	
	Group 1.[1]	Group 2.[2]	Group 1.[1]	Group 2.[2]
Eastern	14	14	31	28
Southern	10	10	28	23
Western	6	15	22	27
Total, United States	10	14	27	27

[1] Comprises families with incomes up to $1,000. [2] Comprises families with incomes up to $2,000.

APPENDIX III.—EMPLOYEES OF RAILROADS, DECEMBER, 1917, GROUPED BY MONTHLY RATES OF PAY.

This statement is compiled from the returns of class 1 railroads and certain switching and terminal companies, made to the commission in response to its request. The rates of pay are for the standard month discharged of all compensation for overtime or extra service, and constitute a table of wages, not of earnings, for the month named. The railroads included in this summary will be found listed in Appendix IX. For comparative purposes the returns are separately presented for each district, and for the United States as a whole.

NUMBER OF EMPLOYEES OF ALL CLASS 1 SWITCHING AND TERMINAL RAILROADS IN THE UNITED STATES, GRADED ACCORDING TO THEIR MONTHLY RATES OF PAY, DECEMBER, 1917.

[For comparative purposes this statement shows separately the number of employees in each grade, in each district, and in the United States as a whole.]

Monthly rate of pay.	Eastern district.	Southern district.	Western district.	Total for United States.	Per cent by classes.	Cumulative per cent.
1	2	3	4	5	6	7
$30 or less	8,319	10,173	8,871	27,363	1.41	1.41
$30 to $35	5,626	18,450	8,464	32,540	1.68	3.09
$35 to $40	8,289	25,362	17,716	51,367	2.65	5.74
$40 to $45	11,167	18,381	17,930	47,478	2.45	8.19
$45 to $50	14,841	20,961	44,173	79,975	4.11	12.30
$50 to $55	40,185	18,727	50,964	109,876	5.67	17.97
$55 to $60	71,060	17,553	67,952	156,565	8.07	26.04
$60 to $65	101,054	15,480	65,159	181,693	9.37	35.41
$65 to $70	76,078	15,514	45,767	137,359	7.08	42.49
$70 to $75	70,947	20,347	74,108	165,402	8.53	51.02
$75 to $80	77,285	17,416	54,922	149,624	7.72	58.74
$80 to $85	60,660	13,575	48,244	122,479	6.32	65.06
$85 to $90	53,750	11,726	35,881	101,357	5.23	70.29
$90 to $95	49,497	10,653	36,316	96,466	4.97	75.26
$95 to $100	45,374	7,838	34,959	88,171	4.55	79.81
$100 to $110	55,688	16,391	45,589	117,668	6.07	85.88
$110 to $120	42,618	10,613	31,307	84,538	4.36	90.24
$120 to $130	32,895	4,865	20,252	58,012	2.99	93.23
$130 to $140	18,080	5,412	18,323	41,815	2.16	95.39
$140 to $150	13,074	4,748	14,802	32,624	1.68	97.07
$150 to $160	9,119	1,924	5,246	16,289	.84	97.91
$160 to $170	5,814	2,153	5,833	13,800	.71	98.62
$170 to $180	4,693	1,035	3,342	9,070	.47	99.09
$180 to $190	2,672	702	1,947	5,321	.27	99.36
$190 to $200	2,436	698	2,015	5,149	.26	99.62
$200 to $210	1,113	296	711	2,120	.11	99.73
$210 to $220	714	238	551	1,503	.08	99.81
$220 to $230	714	262	558	1,534	.08	99.89
$230 to $240	338	74	258	670	.03	99.92
$240 to $250	717	210	644	1,571	.08	100.00
Total	884,818	291,777	762,804	1,939,399	100.00	.....

APPENDIX IV.—AVERAGE MONTHLY EARNINGS FOR 1915, 1916, AND 1917, BY OCCUPATIONAL CLASSES.

The tables next attached show the average earnings per month of employees in each occupational class, in each district, and for the United States as a whole, separately presented for each of the years 1915, 1916, and 1917. This data was compiled as to 1915 and 1916 from the reports of carriers to the Interstate Commerce Commission, and for 1917 from reports of carriers to this commission.

AVERAGE MONTHLY EARNINGS OF EMPLOYEES OF CLASS 1 RAILROADS IN THE UNITED STATES DURING THE FISCAL YEAR ENDED JUNE 30, 1917, AND THE CALENDAR YEARS ENDED DEC. 31, 1916 AND 1917, RESPECTIVELY.

[The original table gives the data separately for the eastern, southern, and western districts. For the sake of brevity, only the totals for the United States are here reproduced.]

No.	Occupation.	Average monthly earnings per employee in each occupation.		
		1915	1916	1917
1	General officers, $3,000 per annum and upwards	.....	.....	.....
2	General officers below $3,000 per annum	$151.88	$151.91	$152.63
3	Division officers, $3,000 per annum and upwards	.....	.....	.....
4	Division officers below $3,000 per annum	147.62	147.64	155.27
5	Clerks, $900 per annum and upwards (except No. 37)	94.05	99.16	102.08
6	Clerks below $900 per annum (except No. 37)	54.17	56.86	56.77
7	Messengers and attendants	36.17	39.26	42.84
8	Assistant engineers and draftsmen	93.42	93.76	95.22
9	M. W. & S. foremen (excluding Nos. 10 and 28)	92.26	94.36	100.00
10	Section foremen	64.30	67.98	73.89
11	General foremen, M. E. department	127.77	131.13	137.73
12	Gang and other foremen, M. E. department	97.24	102.68	112.76
13	Machinists	85.87	100.42	116.35
14	Boiler makers	89.68	102.46	118.85
15	Blacksmiths	77.21	90.22	104.94
16	Masons and bricklayers	65.76	77.47	77.15
17	Structural-iron workers	74.84	85.88	84.38
18	Carpenters	64.00	71.51	78.45
19	Painters and upholsterers	63.15	71.44	79.10
20	Electricians	78.44	79.74	86.03
21	Air-brake men	67.63	78.49	90.41
22	Car inspectors	73.48	81.11	95.24
23	Car repairers	62.24	68.80	82.78
24	Other skilled laborers	71.07	77.99	88.90
25	Mechanics' helpers and apprentices	50.39	58.01	68.58
26	Section men	37.68	42.41	50.31
27	Other unskilled laborers	46.44	50.71	58.25
28	Foremen of construction gangs and work trains	84.36	77.54	85.78
29	Other men in construction gangs and work trains	42.88	46.35	52.44
30	Traveling agents and solicitors	123.83	130.54	136.73
31	Employees in outside agencies	81.65	86.81	88.10
32	Other traffic employees	79.97	99.56	110.68
33	Train dispatchers and directors	132.99	143.45	149.76
34	Telegraphers, telephoners, and block operators	66.15	71.55	76.29
35	Telegraphers and telephoners operating interlockers	68.47	72.50	79.60
36	Levermen (nontelegraphers)	60.90	64.73	71.09
37	Telegrapher-clerks	66.32	69.24	74.31
38	Agent-telegraphers	68.50	71.69	79.04
39	Station agents (nontelegraphers)	77.63	79.37	86.61
40	Station masters and assistants	91.29	84.08	106.96
41	Station service employees (except Nos. 5, 6, 37, 38, 39, 40, and 66)	50.22	54.73	58.57
42	Yardmasters	131.09	135.35	151.12
43	Yardmasters' assistants (not yard clerks)	118.79	129.29	143.45
44	Yard engineers and motormen	126.76	134.39	149.78
45	Yard firemen and helpers	75.99	82.30	91.66
46	Yard conductors (or foremen)	112.66	118.61	132.52
47	Yard brakemen (switchmen or helpers)	91.93	99.81	111.18
48	Yard switch tenders	59.99	62.99	70.48
49	Other yard employees	51.45	46.71	56.01
50	Hostlers	80.95	87.93	103.68
51	Enginehouse men	56.58	60.18	69.70
52	Road freight engineers and motormen	152.75	154.32	175.64
53	Road freight firemen and helpers	94.10	93.82	106.11
54	Road freight conductors	131.59	134.77	154.56
55	Road freight brakemen and flagmen	85.83	87.70	100.17
56	Road passenger engineers and motormen	178.46	177.04	185.93
57	Road passenger firemen and helpers	106.87	108.11	112.83
58	Road passenger conductors	153.57	156.41	163.75
59	Road passenger baggagemen	87.03	91.49	98.01
60	Road passenger brakemen and flagmen	85.23	85.94	91.10
61	Other road train employees	69.00	65.75	68.11
62	Crossing flagmen and gatemen	39.59	40.89	44.65
63	Drawbridge operators	55.33	58.62	63.50
64	Floating equipment employees	54.61	74.36	79.94
65	Express service employees	.....	67.25	7.15
66	Policemen and watchmen	59.15	67.23	74.84
67	Other transportation employees	52.00	56.35	70.31
68	All other employees	50.53	51.84	55.48

A chart is given in the report concerning 6 and 7 day workers by hours worked per day based on a study of 262,637 employees. The figures are:

	Per cent.
6-day workers	64.25
7-day workers	35.75
Working 12 hours or more per day regularly:	
6-day workers	1 17
7-day workers	11.75
Working 11 hours per day regularly:	
6-day workers	1.42
7-day workers	3.21
Working 10 hours per day regularly:	
6-day workers	40.12
7-day workers	12.59
Working 9 hours per day regularly:	
6-day workers	7.30
7-day workers	2.35
Working 8 hours per day regularly:	
6-day workers	14.25
7-day workers	5.84

LABOR TURNOVER OF SEAMEN ON THE GREAT LAKES.

BY EMIL FRANKEL.

The recent growth and increasing expansion of our merchant marine makes the securing of a great number of seamen imperative. Extensive provisions are being made for the training of skilled merchant seamen and considerable attention is being given to the problem of attaining efficiency in seamanship. The training of new men can, however, proceed only if the conditions of employment in the shipping industry are stabilized and the great shifting and continual interchange of crews are materially lessened. This applies to the shipping industry in general as well as to the shipping industry on the Great Lakes, and the desirability of bringing about such working conditions on the vessels of the Great Lakes as will make for a greater degree of permanency of employment among the crews has led shipowners and ship managers as well as representatives of the seamen to pay more and more attention to the problems affecting the personnel of the boats and give careful consideration to the labor turnover, or, rather, crew turnover, as it might be more aptly termed.

While both shipping and shore industries in their operation are affected by the labor turnover, the employment problems of the shipping industry on the Great Lakes are, however, quite different from those of shore industries. The shipping industry in the operation of vessels is subject to factors conditioned by the elements of nature beyond the control of man. Again, the status of shore industries is definitely fixed, and the men employed in these industries are enabled more easily to maintain homes and follow a normal family life. This the majority of seamen, by virtue of the nature of their work, are seldom enabled to do. Some of the principal causes of the great turnover in shore industries are ascribed to lack of standardization of jobs and of compensation. This is not the problem in the shipping industry on the Great Lakes, as its conditions of employment in this respect are more or less standardized. The law prescribing minimum standards of skill for most of the sailors and their qualifications are definitely established through the official certificates issued to them. Wages are standardized, as there is practically one uniform wage scale for nearly all types of boats plying on the Great Lakes, covering the crew of the deck and engine departments. The hours of labor at sea—watches—of employees in the deck and engine departments are definitely fixed by law, as well as the hours of labor in port.

Before discussing the actual figures of turnover of seamen, as found on different classes of boats, a word in regard to the types of steamers

and the general conditions of Great Lakes shipping may not be amiss. The principal types of boats operating on the Great Lakes are (1) coarse freighters, principally carrying iron ore, grain, and coal; (2) lumber carriers; (3) package-freight carriers; (4) passenger and passenger-freight boats; (5) car ferries; and (6) miscellaneous vessels such as salt carriers, sailing vessels, etc. The types of boats enumerated above and the shipping conditions on the Great Lakes differ one from another in many respects. Some boats run on fixed schedules and between two designated ports. Others have no definite schedules of the ports between which they are to ply, but are shifted as the exigencies of the trade demand. In the size of the vessels as well as in the living conditions offered to the crews great variations are also found. In some cases the trips are very short, perhaps lasting only a few hours; in others they extend over days. Some boats stay in port but a few hours, others remain for days at a time.

The seasonal character of the shipping industry on the Great Lakes has a very important bearing upon the crew turnover. Vessels sailing continuously for periods of more than eight months are very few, and at the end of the season the crews scatter, some entering shore industries in different sections of the country, others going into ocean shipping. Between the time of laying up the boats in the winter and the time of fitting them out in the spring several months elapse, and, in view of the many changes which no doubt take place in the fortunes of these men in the interval, it should not be surprising if only a small number of men return in the spring to the same boats on which they were sailing in the fall of the preceding year.

Of the first type of boats those studied in regard to the crew turnover and the tenure of service of seamen were three bulk-freight steamers of about 2,150, 4,950, and 6,300 gross tonnage, respectively. These boats are owned by a firm which is a member of the Lake Carriers' Association, and which, in the operation of its boats as well as in its labor policy, is governed by the rules and regulations of the Lake Carriers' Association. All its men are hired and shipped through the shipping offices established by the Lake Carriers' Association.[1] It should be emphasized at this point that the general attitude of the association toward labor and labor organizations is of very great importance to the entire shipping industry on the Great Lakes, as it represents more than 80 per cent of the total gross registered tonnage. The three boats mentioned were in continuous operation from the latter part of April, 1917, to about the middle of December, 1917. Due to the pressure upon shipping, the loading and unloading had to proceed with the utmost speed, and stays in port were very short. The crew turnover on these boats is shown in the table following.

[1] For details see U. S. Bureau of Labor Statistics Bul. 235, Employment System of the Lake Carriers' Association.

CREW TURNOVER AND SERVICE RECORD ON THREE BULK-FREIGHT STEAMERS OF THE GREAT LAKES—SEASON OF 1917.

Occupation.	Number of seamen who served specified number of days on one boat.											Number in crew.	Per cent of turnover.[1]	Average number of days served.	Average monthly rate of wages.
	Under 7.	7 and under 15.	15 and under 30.	30 and under 60.	60 and under 90.	90 and under 120.	120 and under 150.	150 and under 180.	180 and under 210.	210 and over.	Total.				
Licensed officers	.....	1	.....	.....	.....	.....	.....	.....	.....	6	7	6	16.7	200.6	$144.30
Boatswains	.....	1	2	.....	.....	.....	.....	.....	1	1	5	2	150.0	93.8	93.60
Wheelsmen-watchmen	.....	18	20	10	4	.....	.....	2	1	4	59	12	391.7	46.9	78.90
Deck hands	21	43	27	13	1	2	.....	.....	.....	5	112	14	700.0	27.7	51.30
Licensed engineers	.....	.....	1	.....	.....	.....	.....	.....	.....	7	8	7	14.3	210.9	177.30
Oilers	3	2	2	4	5	1	2	.....	.....	5	24	9	166.7	92.3	79.30
Firemen	10	5	15	7	8	4	1	1	1	.....	52	9	477.8	41.5	78.90
Coal passers	7	22	9	7	4	1	1	1	.....	1	53	8	562.5	32.1	49.50
Stewards	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	3	3	.....	236.5	118.20
Assistant stewards	1	6	7	4	.....	1	.....	.....	.....	1	20	3	566.7	35.9	63.00
Porters	1	9	5	.....	1	.....	.....	.....	.....	1	17	2	750.0	28.9	50.70
Total	43	107	88	45	23	9	4	4	3	34	360	75	380.0	48.4	.....
Per cent	12.0	29.7	24.5	12.5	6.4	2.5	1.1	1.1	0.8	9.4	100.0	.....	.....	.....	.....

[1] Based upon replacement figures.

The turnover among licensed officers and engineers is very low and stewards show none at all. Among boatswains and oilers the percentage of turnover is 150 or over, and wheelsmen-watchmen show more than double that percentage. The turnover among firemen is nearly 500 per cent; coal passers and assistant stewards show a turnover of over 560 per cent. The turnover among deck hands is 700 per cent, and porters show an even larger percentage. The turnover figures of deck hands would be considerably higher were it not for five deck hands who stayed on one boat the full season, necessitating no replacement, while for the nine deck hands of the other two boats, 107 different persons had to be shipped. The table also reveals the fact that out of the total number of seamen who served on these three boats more than 66 per cent sailed for periods of less than one month, 18.9 per cent served between one and three months, 4.7 per cent served between three and six months, and a little over 10 per cent of the total number sailed for periods of more than six months.

The wage figures as shown in the foregoing table are the possible average monthly rates based upon the full season's earnings of the occupations listed, taking into account all changes in the rates of wages during the navigation season of 1917.

In order to secure greater stability of tenure among the crews, the Lake Carriers' Association has offered bonus payments, adopted definite policies regarding the type of labor to be employed, and inaugurated a scheme known as the "welfare plan." During the season of 1917 licensed officers were granted an extra full month's pay

if they had served all season on a single vessel or in a single employ, and laid their vessels up at the end of the season; those who so served from August 15 to the close of the season were given an extra half month's pay; and those who so served from October 1, one-third of a month's pay. Furthermore, the compensation for masters and chief engineers of certain classes of vessels was placed on the basis of a season of 12 months, and other licensed officers were placed on a basis of 11, 10, or 9 months, according to the class of vessel.

To prevent the great shifting among the deck crews, especially that of the deck hands, masters and mates, many of whom live in small towns near the Lakes or in rural districts, were expected to bring their deck crews, especially their deck hands, with them at the time of fitting out in the spring. In a recent study[1] the claim is made that for deck hands they secure mostly farmer youths who are unacquainted with unionism, have no class prejudices, are regular in their habits, and are glad to accept the change of work and the relatively high wages offered them. To cut down the extensive shifting among coal passers and firemen the Lake Carriers' Association is said to be making efforts to recruit them from the ranks of southern Europeans, especially Greeks, Poles, and Italians, etc., who "have been found to be willing workers, temperate in their habits, oftentimes without a home or domestic connections other than those afforded on the boats, and for the most part they are unacquainted with unionism or collective action of any sort. Most of them are frugal in their habits of living, anxious to earn and anxious to save. They are willing to undertake hard tasks for what to them is a high wage, and they obey orders, when they understand them, uncomplainingly."[1] In its last annual report the Lake Carriers' Association complains, however, that during 1917 "the personnel of men procurable for the positions of firemen, deck hands, and coal passers has been of a lower standard than in recent years."[2]

Attempts were also made by the Lake Carriers' Association to secure oilers and handy men from among graduates of engineering and technical schools who are expected to develop into engineers.

Besides the efforts to bring about changes in the personnel of the boats, the Lake Carriers' Association has sought to improve working conditions through (1) regulation of sanitary conditions, care of food supplies, and safeguarding of the water supply; (2) promotion from the ranks of the employees; (3) maintenance of free schools of navigation and marine engineering; (4) payment of disablement and death benefits; and (5) a savings plan.

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[1] H. E. Hoagland: Wage bargaining on the vessels of the Great Lakes, p. 96.
[2] Annual Report of the Lake Carriers Association, 1917, p. 230.

The following table shows the turnover and length of employment of the crews of five lumber steamers, the gross tonnage of the different boats ranging from over 400 to about 800. These boats began to sail the latter part of April, 1917, and were laid up the early part of December.

CREW TURNOVER AND SERVICE RECORD ON FIVE LUMBER STEAMERS OF THE GREAT LAKES—SEASON OF 1917.

Occupation.	Number of seamen who served specified number of days on one boat.											Number in crew.	Per cent of turnover.[1]	Average number of days served.	Average monthly rate of wages.
	Under 7.	7 and under 15.	15 and under 30.	30 and under 60.	60 and under 90.	90 and under 120.	120 and under 150.	150 and under 180.	180 and under 210.	210 and over.	Total.				
Mates	.....	.....	1	.....	.....	.....	.....	.....	1	4	6	5	20.0	180.2	$119.10
Wheelsmen	1	2	7	3	1	1	.....	1	2	5	23	10	130.0	93.4	78.60
Watchmen	1	7	20	6	6	3	.....	.....	.....	2	45	10	350.0	45.8	78.60
Deck hands	.....	15	14	5	6	1	2	1	.....	2	46	10	360.0	45.5	51.30
Licensed engineers	.....	1	.....	.....	1	1	2	.....	2	6	13	10	30.0	167.2	131.70
Firemen	3	13	17	18	9	4	3	.....	1	2	70	14	400.0	47.0	78.60
Coal passers	1	7	8	6	1	.....	1	.....	.....	.....	24	4	500.0	28.4	51.30
Stewards	1	.....	4	11	1	.....	1	2	.....	4	24	10	140.0	83.0	78.90
Total	7	45	71	49	25	10	9	4	6	25	251	73	243.8	61.8	.....
Per cent	2.8	17.9	28.3	19.5	10.0	4.0	3.5	1.6	2.4	10.0	100.0	.....	.....	.....	.....

[1] Based upon replacement figures.

A glance at this table will show at once that the turnover among the crews of lumber boats is considerably less than that of bulk-freight carriers—243.8 per cent, as against 380 per cent. As is the case on bulk-freight carriers, licensed officers and engineers show a very low percentage of turnover. Watchmen's and deck hands' percentages of turnover are 350 and 360, respectively, firemen show a turnover of 400 per cent, and coal passers of 500 per cent. Of the total number of men shipped, 49 per cent sailed for periods of less than 30 days on any one boat, 29.5 per cent shipped for periods of from one to three months, over 9 per cent sailed between three and six months, and more than 12 per cent served for periods of more than six months.

The greater stability of the men employed on lumber-carrying boats is ascribed to the fact that they are more thoroughly organized than on any other boats of the Great Lakes. Union officials are allowed free access to piers where lumber boats are tied up, and it is claimed that the employers have always displayed a certain fairness toward their men and their representatives. Another important factor in the greater tenure of service of seamen on lumber boats is the fact that these boats usually stay in port from four to five days before sailing again, which gives the crew a chance to go ashore and seek the pleasures they have been deprived of on board. This is in

contrast to conditions existing on bulk-freight steamers belonging to the Lake Carriers' Association in which men usually must ship within very short periods after touching port. It is also asserted that the men employed on lumber boats represent a better type of seamen and are a distinct and separate class by themselves.

Lumber barges, which are nonself-propelling and towed by steamers, show a turnover of 96.3 per cent. This comparatively small percentage is due to the easier life which sailing on barges permits and the possibility of more intimate relations between different members of the crew.

For study of the turnover and the length of service of the crew of passenger-freight steamers, three vessels were selected which sailed continuously for the greater part of the season of 1917, and where no occasion arose to lay up the boat for any reason. One is a wooden vessel of the older type, one is an older vessel of steel construction, and the third is a steel vessel of modern construction.

CREW TURNOVER AND SERVICE RECORD ON THREE PASSENGER-FREIGHT STEAMERS OF THE GREAT LAKES—SEASON OF 1917.

Occupation.	Number of seamen who served specified number of days on one boat.											Number in crew.	Per cent of turnover.[1]	Average number of days served.
	Under 7.	7 and under 15.	15 and under 30.	30 and under 60.	60 and under 90.	90 and under 120.	120 and under 150.	150 and under 180.	180 and under 210.	210 and over.	Total.			
Licensed officers	.....	.....	1	5	3	3	.....	.....	.....	9	21	10	110.0	171.7
Wheelsmen	8	3	6	5	2	2	2	3	1	1	33	6	450.0	59.1
Lookout men	17	9	7	7	6	3	2	.....	2	1	54	6	800.0	43.4
Watchmen	8	4	6	4	4	2	1	1	.....	4	34	6	466.7	63.6
Sailors	11	9	7	12	.....	.....	1	.....	7	.....	47	12	291.7	51.4
Licensed engineers	1	1	1	.....	.....	1	.....	.....	8	.....	12	7	71.4	237.5
Oilers	4	2	1	6	2	4	1	3	2	6	31	9	244.4	119.4
Firemen	60	29	28	22	18	2	2	1	.....	2	164	12	1,266.7	26.9
Coal passers	75	35	24	10	4	.....	1	.....	1	1	151	8	1,787.5	16.1
Pursers	.....	.....	1	1	1	2	.....	2	1	2	10	5	100.0	154.2
Stewards	4	1	1	4	1	1	.....	.....	1	1	14	3	366.7	69.8
Cooks	5	2	3	2	.....	.....	.....	1	2	1	16	3	433.3	68.0
Assistant cooks	53	38	20	14	3	2	1	.....	.....	1	132	8	1,550.0	18.3
Pantrymen	27	23	15	9	4	1	1	.....	.....	1	81	6	1,250.0	22.8
Waiters	113	43	33	17	7	5	.....	.....	1	1	220	11	1,900.0	16.9
Cabin maids and waitresses	8	2	8	7	3	6	2	2	1	4	43	12	258.3	73.4
Porters	58	23	17	11	4	3	2	1	.....	1	120	9	1,233.3	20.9
Cabin and bell boys	62	28	15	13	4	2	.....	1	.....	3	128	10	1,180.0	22.8
Cabin watchmen	7	3	2	3	1	4	.....	1	.....	1	22	3	633.3	55.1
Storekeepers	3	11	8	1	3	.....	1	.....	.....	1	28	3	833.3	33.5
Forecastle stewards	4	4	4	4	1	1	1	.....	.....	1	20	3	566.7	40.3
All others	23	13	5	12	4	2	.....	.....	.....	2	61	5	1,120.0	36.8
Total	551	283	213	169	75	46	18	16	27	44	1,442	157	818.5	35.5
Per cent	38.2	19.6	14.8	11.7	5.2	3.2	1.3	1.1	1.9	3.0	100.0	.....	.....	.....

[1] Based upon replacement figures.

The percentage of turnover—818.5 per cent—on these passenger-freight steamers is the highest among the three types of boats studied. It is to be expected that more changes in the personnel would take

place on these boats, because of the greater length of the sailing season, and more especially in the steward's department, because of the type of labor represented by the majority of those serving in this department. But even taking into account the longer navigation season and disregarding for the moment the turnover figures of the steward's department employees, there are comparatively greater changes in the crew of the deck and engine departments on passenger-freight liners than in the same departments of either the bulk freight or lumber carriers. Nearly 73 per cent of the men who sailed on these passenger-freight vessels stayed for periods of less than 30 days. Of the men who have shipped in the deck and engine departments, that is, those directly concerned with the navigation of the vessel, more than 65 per cent sailed for periods of less than 30 days, and over 77 per cent of the employees of the steward's department have shipped for periods of less than a month. The unusually great shifting among the employees on this type of boat may be due largely to the general working conditions which, it is claimed, in some ways are different from and less favorable than those prevailing on other classes of vessels. Living accommodations are in many cases very poor, and an additional cause may be found in the long and irregular hours which the men employed in the steward's department are obliged to work and the low rates of wages paid them. In some cases bonuses ranging from $5 to $10 or even more per month have been offered to employees of the steward's department for continuous service over certain definite periods, but only a small number has taken advantage of this offer.

To analyze in detail the causes of the great sailing instability among seamen is a task entirely beyond the scope of the present article. In this connection, however, due consideration must be given to the nature of the seamen themselves. They have always been regarded as living a kind of care-free and roving life, and frequent changes of employment have been considered to be a part of the seaman's calling. With the changing conditions of sailing and the revolutionizing of navigation the sailor type too is changing and in many respects is coming to differ little from the ordinary wageworker ashore. Among the more obvious factors influencing the seaman in the length of his stay on any one boat may be mentioned the demands for labor by industries ashore and the high rates of wages paid, the nature of his work, which often is monotonous and hazardous, the close confinement aboard ship, the lack of recreation and intercourse, frequently very poor and unsatisfactory living conditions, and the treatment accorded him by superior officers.

In discussing the turnover some of the factors tending to secure greater stability and longer tenure of service have already been

mentioned. For the sake of convenience they may be briefly summarized here as being the granting to seamen of a greater voice in determination of the conditions under which they are to sail, increase in rates of wages approximating those of shore labor requiring similar skill, special inducements offered for continuous service, selection of suitable types for the particular nature of the work, improvement in the living and housing conditions, and lastly the establishment of amicable relationship between the heads of the departments and their men.

LABOR AND THE WAR.

PROCEDURE OF THE NATIONAL WAR LABOR BOARD IN TAKING UP INDUSTRIAL DISPUTES.

After thorough consideration of the problems to be met in the operation of the National War Labor Board's machinery for the adjudication of industrial controversies, the board on May 13 agreed upon a plan of procedure and method to be followed in all cases. This plan provides for the appointment of subcommittees composed of two members to act for the board in every local controversy, and the appointment of permanent local committees in cities and districts to act in cases therein arising, and also comprehends a method of investigating industrial disputes by trained field agents sent into territories by the board from Washington. It lays down the method to be followed by persons desiring to bring a condition to the attention of the board.

Under the form of procedure thus established, the board itself will sit in hearing upon cases only when its sections, or subcommittees, or local committees find it impossible to settle a controversy. In such cases the board will sit as a board of arbitration, decide the controversy, and make an award.

In compliance with the direction of the President's proclamation of April 8, the board will hear appeals in the following cases:

1. Where the principles established by him in such proclamation have been violated.

2. Where an award made by a board has not been put into effect, or where the employees have refused to accept or abide by such award.

3. To determine questions of jurisdiction as between Government boards.

FULL TEXT OF THE DECISION.

Following is the full text of the decision:

PROCEDURE.

1. Any person desiring to bring before the National War Labor Board an issue between employer and employees, of which the board has cognizance, shall deliver to the secretary of the board a written statement, signed by him, with his proper post-office address at his home and in Washington. The statement shall contain a brief

description of the grievance and the names of the persons or corporations against whom he complains, with their post-office address.

2. Where an employer and employees both desire to submit a controversy to the board, they shall sign a short joint statement of the issue between them, with their respective post-office addresses, and request the action of the board. They shall deliver this signed statement to the secretary of the board.

3. Controversies in which the Secretary of Labor invokes the action of the board, together with the documents transmitted by him, shall be delivered to the secretary of the board.

4. Such complaints, submissions, and references by the Secretary of Labor shall be received by the secretary of the board and filed in his office, and indorsed with the date of filing.

5. The secretary of the board shall keep one docket for the filing of of all complaints, submissions, and references, and shall number them on the docket in the order in which they are received and filed. Thereafter the cases shall be referred to by such number.

6. Where the complaint or submission filed shall show clearly that another board than this has primary jurisdiction therein, the secretary is authorized to direct the proper reference, and to advise the party or parties initiating the proceeding of such reference. At the next session of the board the secretary shall advise the board of his disposition thereof.

7. The secretary of the board shall digest all cases presented and bring them to the prompt attention of the board for its action.

ORGANIZATION OF THE BOARD FOR HEARINGS AND ADJUSTMENT.

1. Two members of the board, one from the employers' side and one from the employees' side, shall be appointed to act for the board in respect to every local controversy, the members to be named by the joint chairman at the instance of the respective groups of the board. These members shall be called a section of the board, and shall hear and adjust cases assigned to them. If they can not effect any adjustment, they shall summarize and analyze the facts and present the same to the board with their recommendations.

2. The secretary shall select trained and experienced men of neutral attitude to act as examiners, to accompany the sections, and to assist them in the discharge of their duty by investigation, digest of evidence, and in other proper ways.

3. The national board may appoint permanent local committees in any city or district to act in cases therein arising. In the selection of such local committees, recommendations will be received by the national board from associations of employers and from the central labor body of the city or district and other properly interested groups.

Sections of the board are authorized to appoint temporary local committees where permanent local committees have not been appointed by the board.

4. Two special field representatives may be selected by the secretary from names submitted by the joint chairman to make a joint investigation of any complaint for the purpose of ascertaining the complete facts without the intervention of sections.

ARBITRATION.

1. When the board, after due effort of its own, through sections, local committees, or otherwise, finds it impossible to settle a controversy, the board shall then sit as a board of arbitration, decide the controversy, and make an award, if it can reach a unanimous conclusion. If it can not do this, then it shall select an umpire, as provided, who shall sit with the board, review the issues, and render his award.

COORDINATION OF THE WORK OF EXISTING BOARDS.

1. To comply with the direction of the President in his proclamation of April, 8, 1918, constituting this National War Labor Board, it will hear appeals in the following cases:

1. Where the principles established by him in such proclamation have been violated.

2. Where an award made by a board has not been put into effect by employers, or where the employees have refused to accept or abide by such award.

3. To determine questions of jurisdiction as between Government boards.

Appeals will not be heard by the National War Labor Board from the decisions of regularly constituted boards of appeal, nor from any other board to revise findings of fact.

COORDINATION OF THE LABOR ACTIVITIES OF THE GOVERNMENT.

The Department of Labor announced, on May 13, the appointment of a labor policies board, with Mr. Felix Frankfurter as chairman. The purposes of the new board are explained in the text of the announcement:

Mr. Felix Frankfurter, of Cambridge, Mass., has been appointed by Secretary Wilson as assistant to the Secretary of Labor in charge of linking up the activities of the Department of Labor with the industrial service sections of the War and Navy Departments, the Shipping Board, and War Industries Board.

By Executive order of the President on January 4, 1918, Secretary Wilson was made War Labor Administrator in addition to his duties as Secretary of the Department of Labor. Secretary Wilson immediately called together an advisory labor council, headed by former Gov. John Lind, of Minnesota, and the council, which included

representatives of both labor and management, made a unanimous report, in which it recommended the establishment of several bureaus under the Labor Administrator to deal with the subjects of employment, housing, wage adjustments, conditions of work, women in industry, etc. Three of these bureaus have already been established, and the appointment of Mr. Frankfurter presages the filling of the other recommended positions in the labor administration as soon as Congress makes the necessary appropriations.

A policies board will be created to assist Mr. Frankfurter in the work of coordinating the activities of the Department of Labor with the production sections of the War Department, the Navy Department, and the Shipping Board. This board, of which Mr. Frankfurter will be chairman, will represent the Department of Labor, the National War Labor Board, the War Department, the Navy Department, the Department of Agriculture, the Shipping Board, the Railroad Administration, and the War Industries Board.

Mr. Frankfurter has been assistant to the Secretary of War since the outbreak of the War. Recently he returned from a mission abroad, during which he familiarized himself with the labor situation both in England and France and the machinery which has been established by the governments of those countries to deal with the problems. Previously he was secretary and counsel to the President's Mediation Commission, which made exhaustive studies of labor conditions in the mountain regions and on the Pacific coast, and which dealt with the serious conditions prevailing last fall in the copper, oil, and lumber industries and in the packing-house industry in Chicago and the Middle West.

INVESTIGATION OF BISBEE (ARIZ.) DEPORTATIONS.

The United States Department of Justice is carrying on an investigation of the deportation last year of 1,200 men from Bisbee, Ariz., in order to determine whether the criminal laws of the United States were violated. Such investigation was recommended by the President's Mediation Commission in its report of November 6, 1917. This report was published in full in the January, 1918, number of the MONTHLY REVIEW (pp. 13 to 17).

The announcement of this investigation, as given in the Official Bulletin for May 9, 1918, is as follows:

Under the direction of the Attorney General, special agents of the Bureau of Investigation of the Department of Justice have for some time been developing the inside history of the deportation last year of some 1,200 men from Bisbee, Ariz., with a view of determining whether section 19 of the Criminal Code of the United States was violated.

This section provides that in case two or more persons conspire to injure, oppress, threaten, or intimidate any citizen in the free exercise or enjoyment of any right or privilege secured to him by the Constitution or laws of the United States, etc., they shall be fined not more than $5,000 and imprisoned not more than 10 years.

Assistant Attorney General W. C. Fitts and Attorney Oliver E. Pagan are now at Tucson, Ariz., where the United States district court of the State is in session, and the former is specially charged with the duty of presenting the Government's views and securing such action as the law and the facts justify.

COMMUNAL KITCHENS IN EUROPEAN COUNTRIES.[1]

BY ANICE L. WHITNEY.

GREAT BRITAIN.

One of the results of the War and the consequent shortage of food supplies has been a movement for the institution of communal or national kitchens in several of the warring countries. In the latter part of 1917 there were about 160 such kitchens in various parts of Great Britain which had been independently started by local authorities for the purpose of meeting the most urgent local needs. Early in the present year an order was issued by the food controller which provided for the establishment of national kitchens, and a director of the communal kitchen section of the Ministry of Food was appointed. In the latter part of March, 1918, there were 250 kitchens with a prospect of this number increasing to 1,000 within two months. While the maintenance of these kitchens on the part of any municipality is entirely voluntary, the Government has adopted a plan to encourage cities or towns to put in operation this machinery for the conservation of food and fuel. It is agreed under this plan that the Government shall provide 25 per cent of the initial outlay in the form of a grant and 25 per cent as a loan, and that the remainder shall be raised by each municipality or council. Advice and adaptable plans are at the service of local committees desiring to organize and carry on communal kitchens. A certain standard for their management is also set and all voluntary kitchens existing at the time the order was issued were to be licensed or, if they did not conform to the new requirements, were to be closed.

The object aimed at by the Ministry of Food in the extension of the facilities for communal feeding is not the relief of any one class of citizens but the endeavor to secure national economy in the use of fuel and foodstuffs and at the same time to insure the well-being of all. It is realized that not only is there much waste in many households but that even when this loss is reduced to a minimum the same amount of food which is prepared in many separate establishments can be much more economically cooked in one centralized kitchen.

One of the most important problems to be met at the outset is the forming of public opinion. It is necessary to make the public clearly understand that these kitchens are in no sense a charitable enterprise but that, while they are run on a nonprofit basis, they are to be entirely self-supporting. The kitchens in one city, which were started on a large scale, failed because of the taint of charity which was unfortunately attached to them. In most cases, however,

[1] Information for this article was compiled from consular reports and articles in the Manchester [England] Guardian, Quarterly Review [England], and National Food Journal [England].

they have been so successful as to make it evident that they have passed the experimental stage and that they are to become one of the most important factors in meeting the national needs along the line of food conservation. It is essential for their success that every effort should be made to make them attractive to the public. They must be established in the right kind of surroundings, they must cater to the tastes and prejudices of patrons, and they must also offer such value as to compete with the privately cooked meal.

In towns inaugurating this work the kitchens are established first in industrial areas—munition plants, etc.—where the most pressing need for them is felt. Food experts are employed and a number of French and American cooks were engaged, soon after the plan was under way, to help introduce new ideas in economical and nutritious cooking.

Some of the direct advantages of the plan, aside from the all-important point of making the food supply go as far as possible, are the saving of fuel in the home and the opportunity it affords the poorer classes to obtain both cheaper and better food. In industrial sections it is also of advantage to working mothers who have little time to prepare meals for their families, for it is a means of saving them much labor and at the same time enables them to provide more nourishing meals for the children. The kitchens make an appeal also on the point of convenience, since the buying of food supplies is becoming increasingly vexatious, often entailing the necessity of standing for hours in queues with the chance that the supply may fail before all customers are served.

Prices charged for food are very reasonable, since supplies are bought at wholesale prices and only the actual cost of the materials and the expense incidental to the running of the kitchen are charged for the cooked food. As far as possible facilities already existing are utilized, such as plants for feeding school children and places already equipped with steam appliances, such as public baths and halls.

In most cities only the midday meal is served at first, but as soon as the success of the undertaking is assured, in each case it is urged by the Ministry of Food that all meals be provided. The purpose also is to have patrons carry the food to their homes, and even in those kitchens which provide restaurant space the endeavor is made to keep at a minimum the number of meals eaten on the premises.

There are two methods advised for operating the kitchens. One provides for dispensing the food direct to the purchasers; the other provides for a central plant from which food shall be distributed to a number of retail branches, often 9 or 10, the food being carried to the distributing points by tram cars or motor vans and kept warm by means of electric attachments. The latter plan is advocated by the

Ministry of Food, since it reduces the expense of appliances, simplifies purchases, and puts the technical part of the work under one roof, where it can be supervised by a highly qualified person, although it has the one disadvantage of not showing the customers the conditions under which the food is prepared.

The problems presented in planning for these kitchens are somewhat different from those involved in carrying on an ordinary restaurant. There are two factors, consideration of which is essential to the success of the plans; one is a bill of fare which can be prepared with the least variety of appliances, thereby reducing the cost and amount of labor required; the other, the preparation of foods which can be warmed over without spoiling, thus permitting the preparation of food some hours before it is sold so that it can be sent to different centers for distribution. Food prepared with this object in view can also be warmed in the homes instead of at the distributing points.

There are naturally some variations in the working out of plans as a result of difference in local conditions. The kind of menus served depends on the class of customers to be reached and the necessity for economical operation. An example of a kitchen which has been so successful that many are being fitted out on the same model is one in London which supplies about 6,000 customers a week, representing probably from 12,000 to 15,000 consumers. Here, because of the necessity for selling the food at low prices, a simple bill of fare has been adopted which saves both labor in preparing the meal and expensive installations. The menu consists of soup, 2 cents; a meat course, 6 cents; or a substitute on meatless days, 4 cents; one vegetable, 2 cents; and a dessert, 2 cents. The meat is served usually in the form of a pie, baked in individual tins, variety on different days being secured by the use of different meats. This method of serving the meat reduces the number of appliances needed, facilitates the cooking and service, and provides the meat in a convenient form to be taken home. A meat pie large enough for five or six persons is also served.

By the use of large steam-jacketed cooking vessels a large amount of meat can be cooked at one time. The water in which the meat is boiled and the bones are utilized in making the soup. In order further to simplify the cooking the sweet course is always a roll pudding with a fruit filling. The rolls are put into cylindrical tins (two half-cylinders jointed together), which can be stacked in the steam cookers, and the pudding after it is cooked is cut into pieces of uniform size. The equipment consists of eight 100-gallon steam-heated meat boilers, six large vegetable boilers, six steam cookers, and three brick-lined pastry ovens. This kitchen is economical in operation, since the uniformity in the kinds of food served reduces the number required to prepare it.

Kitchens which serve a fairly wide choice of cooked food have been started in several cities, where the necessity for keeping down the cost was not so great, and have been so successful that it is unlikely that the menus will be reduced. A typical menu is as follows:

	Cents.		Cents.
Scotch broth	3	Potatoes	2
Fish roll	4	Parsnips	2
Vegetable pie	4	Ginger pudding	4
Minced meat	8	Plain pudding with sauce	4
Roast meat	10	Baked rice pudding	3

The appliances used in these kitchens are similar to those used in canteens and consist of steam cookers, ovens, stock pots, vegetable boilers, hot closets, and vegetable and soup warmers at the serving counters. The customers have to provide their own receptacles for carrying the food home. At present these carriers are usually home-made affairs, nothing having yet been designed to fill the need, owing both to the very recent development of the kitchens and to the restrictions on the use of metal.

A novel departure from the established form of kitchen is reported from one city in which a one-deck electric tramcar, equipped to serve about 800 portions, is used not only to distribute cheap dinners, but also to cook them in transit, the ovens and cookers being supplied with electric current from the overhead wires. At one end of the car is a cash box, where orders are taken and tickets issued, while the food is served from the sides of the car. The food is prepared at the central kitchen in the town and cooked in the car while it is journeying to its destination. In the short time the car has been in operation it has been most successful, the steaming hot portions being quickly sold to the crowd which comes from the factories and nearby homes bringing their jugs and basins and waiting in a queue to be served. The menu and prices are similar to the first one quoted.

The average price of a satisfactory dinner in most cities is from 14 to 16 cents, although in some towns it is as low as 10 cents. The meat courses vary from 6 cents in the cheapest kitchens to from 10 to 12 cents in the higher-priced ones.

While the records show that the number of purchasers falls or rises according as the food situation temporarily grows better or worse, still it seems possible that if, after a thorough trial, these kitchens work out successfully in meeting the war needs, they may become so firmly established as to become a permanent part of civic life. Since large numbers of the women who have gone into industrial life as a result of the demands created by the War will undoubtedly remain in industry it is reasonable to suppose that this method of lightening

the household burdens will make a strong appeal to many of them and therefore the kitchens may outlast the conditions which brought them into existence.

GERMANY AND AUSTRIA.

The food situation in Germany in 1916 was so much more serious than in other European countries that the general movement for mass feeding had its origin there. Up to about the middle of that year kitchens were maintained only for charitable purposes, but in August, 1916, because of the necessities of the case, a strong movement for the establishment of cost-price kitchens and aided workpeople's kitchens began. Munich having had much experience in feeding the poor, was able to offer in November, 1916, a course of instruction in the management of the kitchens. Although there was some talk about "compulsory mass feeding," the war food ministry in a circular issued at that time disclaimed any intention of instituting compulsory measures. In general the same effort to reach all classes was made as has been made in Great Britain. A less comprehensive menu is served than in England, the middle class restaurants serving usually soup and a meat or fish course and the cheaper ones soup and a vegetable course. The one-course meal of some kind of stew is beginning to be favored. Prices have advanced in many places, the rise generally being 2 cents, i. e., from 10 to 12 cents a meal. Lately it has been said that the quantity increased as the quality deteriorated. During 1917 reports were published frequently. These show that the number of meals furnished varied according to seasonal limitations of supplies. Since last autumn there has been an increase in the number of meals served and new kitchens are constantly being opened. No very recent statistics are available, but a report of last December estimates that in communes of over 10,000 inhabitants one-quarter of the population uses the kitchens; in those of over 500,000 inhabitants, one-third.

In Austria the organization is more centralized than in Germany. In May, 1917, a central office for the supply of foodstuffs was created and an association of war kitchens was formed to deal with the central office. The most important development has been in the middle-class kitchens, which have been kept entirely separate in administration from those run for a philanthropic purpose. The supply of food, particularly of flour, has been uncertain, but whether because of a greater lack of foodstuffs than in Germany or because of the method of central control is not clear. There has also been complaint that in the food distribution favoritism is shown to groups of individuals.

The food office in Hungary ordered the establishment of public kitchens in February, 1917. These were started in Budapest, but their establishment throughout the Provinces has been slow, there being only 26 such kitchens last fall. In the Budapest charitable kitchens, soldiers' families have the privilege of being served first.

THE NEUTRAL COUNTRIES.

Sweden, Norway, and Denmark first began communal feeding during the winter of 1916–17, when the shortage of fuel began. In the first two countries the pressure of unemployment has made public assistance in the matter of food necessary, so that the price of meals generally is a little below cost.

In Holland the kitchens, which were begun early in 1917, have not grown in popularity. This is accounted for largely by the fact that the people have been required to make a more radical change in their diet than have other neutral nations. The necessity of keeping up exports has forced the use of rice instead of potatoes and dried pulse in place of fresh vegetables. Since there is no great sympathy among the mass of the people with this policy and since the kitchens provide only the new war diet the people as a whole have been slow to patronize them.

SOCIAL AND ECONOMIC CONDITIONS IN THE NETHERLANDS DURING THE WAR.

A comprehensive survey of social and economic conditions in the Netherlands during the War is given in the recent issue of the regular monthly bulletin of the Dutch statistical office.[1] The birth rate has appreciably declined; stillbirths, if anything, have increased; the marriage rate has fluctuated irregularly, and the death rate somewhat increased. The excess mortality in 1917 over 1916 was due, it is explained, to the high mortality during the winter of 1916–17, commencing in December, 1916, and continuing for the first three months of 1917. The pertinent figures are as follows:

Item.	1913	1914	1915	1916	1917
Number of births per 1,000 inhabitants	28.16	28.18	26.18	26.48	26.05
Number of stillbirths per 1,000 births	37.26	37.55	38.06	38.44	37.72
Number of marriages per 1,000 inhabitants	7.76	6.79	6.67	7.21	7.41
Number of deaths per 1,000 inhabitants	12.30	12.39	12.45	12.89	13.13
Infant mortality (deaths under 1 year of age per 1,000 births)	91.52	96.58	86.78	84.53	87.06

The cessation of foreign competition by the first of the year—a favorable feature in stimulating home industry—was counterbalanced in the second quarter of the year by the almost complete discon-

[1] Maandschrift van het Centraal Bureau voor de Statistiek. The Hague, 1918, vol. 13, No. 1 (January).

tinuance of export trade resulting from a breakdown in foreign commerce and shipping. The food situation became more serious, a shortage of coal was experienced, and prices reached an almost unprecedented level. The coal shortage, which attained its most acute stage in October, caused a complete or partial shutdown of some factories, resulting in short time or unemployment. The national relief committee (*Kon Nationaal Steumcomite*) did some relief work, but the increased demand for workers in agriculture, coal mining, and forestry, and the demands of mobilization were the principal factors in relieving the situation.

Among the industries stimulated by the cessation of foreign competition are desiccation of peas and beans, manufacture of iron and steel, of chemical products, and food and cloth manufacture for war purposes.

The per cent of persons unemployed, based on weekly averages of the number of insured and uninsured workmen unemployed each month during the years 1913 to 1917, are shown for each month of those years in the following table:

PER CENT OF PERSONS UNEMPLOYED, BASED ON WEEKLY AVERAGES OF THE NUMBER OF INSURED AND UNINSURED WORKMEN UNEMPLOYED EACH MONTH, 1913 TO 1917.

Year.	Per cent of persons unemployed in—											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913	8.0	5.7	3.4	3.3	4.2	3.9	3.7	4.9	4.9	4.9	6.5	9.1
1914	11.0	6.8	5.0	4.8	5.9	6.8	7.5	24.2	31.4	32.0	27.5	26.1
1915	25.2	21.7	19.4	15.7	13.7	12.9	13.5	13.4	12.2	11.2	9.6	9.9
1916	9.5	8.3	6.5	5.9	5.1	4.7	4.4	4.6	4.7	4.6	4.7	7.0
1917	9.6	14.8	11.4	10.2	9.1	8.8	8.1	8.4	8.0	7.8	8.8	11.0

Emigration.—Emigration from the Netherlands has very considerably decreased. In 1915 there were issued 83,070 passports as against 53,721 in 1916, and 55,852 in 1917.

Factory permits.—Compared with 1913, authorizations for the construction or enlargement of factories under the factory safety law have generally been fewer in the years 1914, 1915, and 1917, but somewhat greater in 1916. The largest proportion of permits issued has been for the construction or enlargement of establishments engaged in the manufacture of food products. The data bearing on the above points are as follows:

NUMBER OF FACTORY PERMITS ISSUED IN THE NETHERLANDS, 1913 TO 1917.

Year.	Number of permits issued for—		
	New construction.	Enlargements and remodeling.	Total.
1913	1,589	1,912	3,501
1914	1,298	1,801	3,099
1915	978	1,532	2,510
1916	1,622	2,213	3,835
1917	1,401	1,686	3,087

Building permits.—There has been a marked decrease in building activity. The number of dwellings completed in 1917 was 4,777 as compared with 7,236 in 1914, or a decrease of 34 per cent. A similar decrease took place in the number of dwellings for which permits were issued for these same years, i. e., 7,916 in 1914 and 5,114 in 1917, a decrease of 35 per cent. These figures apply to the principal cities of the Kingdom—Amsterdam, Arnhem, The Hague, Haarlem, Leyden, Nimeguen, Rotterdam, Tilburg, and Utrecht.

Government loans for workmen's dwellings.—These increased markedly in 1917 over any of the previous years back to 1913. The face value of each loan was somewhat greater in 1917 than in previous years. Private building having slackened very greatly during the War, the Government has found it necessary to supply the capital for building operations. Data as to Government loans for the years 1913 to 1917 are contained in the statement following:

GOVERNMENT LOANS FOR LOW-COST HOUSING IN THE NETHERLANDS, 1913 TO 1917.

Year.	Number of improved housing associations of all kinds.	Loans for municipal construction.			Loans to municipalities to be advanced to improved housing associations.[1]		
		Number of municipalities.	Number of loans.	Amount of loans.	Number of municipalities.	Number of loans.	Amount of loans.
1913	78	11	11	$62,958	63	79	$3,279,387
1914	81	15	20	66,732	90	115	4,552,367
1915	36	20	24	881,561	74	89	4,271,428
1916	63	20	21	527,194	55	73	3,807,236
1917	79	32	39	8,536,147	77	104	6,626,566

[1] Companies and associations entitled to receive loans must submit to a certain amount of Government inspection and supervision, and limit their dividends to 5 per cent.

Employment exchanges.—The workers have made considerably more use of the employment exchanges in 1917 and 1916 than in the previous years, 1915, 1914, and 1913. The number placed through the Dutch system of national exchanges was 111,122 in 1917 as compared with 69,806 in 1913. Offers of employment have increased more rapidly than applications for employment and the number of persons applying for work for each 100 persons asked for by employers was less in 1917 than in any previous year to 1913, except 1914.

ACTIVITIES OF THE DUTCH EMPLOYMENT EXCHANGES, 1913 TO 1917.

Year.	Number of exchanges.	Persons asked for by employers.	Persons applying for work.	Persons applying for work for each 100 persons asked for by employers.	Positions filled.	Positions filled for each 100 persons asked for by employers.	Average number of positions filled per month.
1913	26	[1] 139,217	[1] 110,521	79.6	69,806	50.1	5,817
1914	28	[2] 221,488	[2] 123,051	55.6	85,250	38.5	7,104
1915	28	[2] 231,125	[2] 147,222	63.7	93,656	40.5	7,828
1916	33	[2] 229,907	[2] 174,529	75.9	106,064	46.1	8,839
1917	33	[2] 285,401	[2] 169,138	59.3	111,122	38.9	9,260

[1] Not including number remaining from previous year. [2] Including number remaining from previous year.

Employment.—There were 11,601 more persons employed in the principal factories of the Netherlands on May 1, 1917, than on May 1, 1914. For every 100 workers in 1914 there were 20 female workers, and in 1917, 23. While there were 1,348 fewer boys employed on May 1, 1914, than on May 1, 1917, there were 4,085 more girls employed. The increase in the number of all women employed on May 1, 1917, over May 1, 1914, was 6,599, or 16 per cent, as against a decrease of 2,265, or 1 per cent, in the number of men employed.

EMPLOYEES IN THE PRINCIPAL FACTORIES OF THE NETHERLANDS MAY 1, 1914, AND MAY 1, 1917.

Industry group.	Employees in each specified industry group.			Per cent female employees were of total employees.	
	Number.		Per cent increase (+) or decrease (−) in 1917 as compared with 1914.		
	1914	1917		1914	1917
Potteries, glass works, etc.	33,311	25,209	−24.3	11	11
Diamond cutting, etc.	6,144	6,124	− .3	.....	.....
Printing and lithographing	11,219	11,733	+ 4.6	6	10
Building trades	387	339	−12.4	.....	.....
Chemical industry	9,941	13,453	+35.3	18	13
Woodworking, cork, and straw industries	17,236	15,986	− 7.3	8	8
Clothing	14,745	22,103	+49.9	85	84
Cleaning	7,134	7,435	+ 4.2	76	75
Art industries	222	240	+ 8.1	.....	.....
Leather and rubber goods	7,616	8,803	+15.6	21	23
Iron (bog ore), coal and peat mining	917	260	−71.6	.....	.....
Metal and machine products and shipbuilding	79,538	84,686	+ 6.5	4	5
Paper manufacture	8,929	8,472	− 5.1	20	23
Flax breaking and dressing	840	1,420	+69.0	.....	.....
Textiles	54,924	51,862	− 5.6	37	39
Gas and electric light and power works	6,843	7,589	+10.9	.....	.....
Food products industries:					
Bakeries	3,916	4,909	+25.4	23	26
Flour milling and rice polishing	2,193	2,012	− 8.3	.....	.....
Dairy products	4,559	5,194	+13.9	8	10
Tobacco and cigars	19,507	20,036	+ 2.7	17	20
Other	22,279	26,136	+17.3	22	24
All industries combined	312,400	324,001	+ 3.7	20	23

Strikes and lockouts.—During each of the years since the War began the total number of strikes and lockouts has been smaller than in 1913. In 1917 the number was 335 as against 427 in 1913.

STRIKES AND LOCKOUTS IN THE NETHERLANDS, 1913 TO 1917.

Year.	Number of—		Total.
	Strikes.	Lockouts.	
1913	400	27	427
1914	250	21	271
1915	259	10	269
1916	356	21	377
1917	[1] 318	17	335

[1] Preliminary figures.

Trade-union membership.—The membership of trade-unions affiliated with the National Federation of Trade-unions (*Nederlandsche Verbond van Vakvereenigingen*) increased from 128,918 on January 1, 1917, to 134,989 on April 1, 141,582 on July 1, and 151,415 on October 1 of that year. The other federations showed equally large increases in membership during the year.

Collective agreements.—Preliminary data show 809 collective agreements in force on January 1, 1917, as compared with 894 on January 1, 1918.

Prices.—The appended table taken from the February (1918) issue of the monthly bulletin of the Dutch Statistical Office[1] gives index numbers of the prices of some articles of daily consumption in the Netherlands during January, 1918, and for the years 1913 to 1917, inclusive.

INDEX NUMBERS OF PRICES OF SELECTED ARTICLES OF DAILY CONSUMPTION IN THE NETHERLANDS, 1913 TO 1917, AND JANUARY, 1918.

[Prices of 1893=100.]

Article.	1913	1914	1915	1916	1917	January, 1918.
Cheese	140	139	160	180	.....	.....
Coffee	94	88	91	100	118	151
Oleomargarine	127	99	102	110	122	132
Butter fat	94	97	130	149	232	320
Rape oil	136	137	192	214	.....	.....
Starch	103	107	130	157	.....	.....
Sugar (moist)	89	91	105	115	116	116
Sirup	100	100	125	161	179	182
Sugar (refined white)	85	89	98	102	103	103
Salt	80	80	90	90	110	140
Tea	112	113	116	119	127	117

The price of coke in 1917, as reported from 8 municipal gas plants, has more than doubled since 1913. Taking 1913 as the basic price or 100, the relative price of this commodity in 1917 was 224; in 1916, 152; in 1915, 124, and in 1914, 96.

COMPENSATION TO BRITISH SEAMEN FOR LOSS OF PERSONAL PROPERTY AT SEA.

[Report of American consul at London to State Department, under date of Feb. 14, 1918.]

Figures have now been compiled by the Board of Trade showing the amount which the British Government has paid in compensation for the loss, through war risks, of the effects of masters, officers, and seamen in British merchant and fishing vessels. In March, 1915, compensation upon a definite scale according to rating was provided by the Government in return for insurance premiums paid by the men.

[1] Maandschrift van het Central Bureau voor de Statistiek. The Hague, February, 1918.

The Board of Trade appointed a committee to consider cases of hardship through loss of effects which had occurred before March, 1915. A year later, when more and more vessels became requisitioned, it was decided to pay compensation for loss of effects to masters, officers, and seamen in requisitioned ships without premium. Finally, in August, 1917, by which time a very large proportion of the British mercantile marine had been taken over by the Government, no premiums were charged to members of crews, and the entire compensation was paid from State funds.

MAXIMUM COMPENSATION ALLOWED.

The present maximum amounts of compensation for loss of effects through war risks, are as follows:

MERCHANT VESSELS.

Rating.	Amount. £	s.	d.	
Master	100	0	0	($486.65)
Certificated officers, surgeons, pursers, wireless operators	50	0	0	($243.32)
Uncertificated officers and apprentices	40	0	0	($194.66)
Carpenters (effects £15, tools £20)	35	0	0	($170.33)
Ratings in stewards' department above the rank of assistant	30	0	0	($145.99)
Ratings in stewards' department not above the rank of assistant	15	0	0	($72.99)
Boatswain, donkeyman, quartermaster, etc	10	0	0	($48.66)
Seamen, firemen, etc	7	10	0	($36.50)
Pilot	15	0	0	($72.99)
Native ratings.				
Chief steward or butler, chief or ship's cook	15	0	0	($72.99)
All other ratings in stewards' and cooks' department:				
Passenger vessels	10	0	0	($48.66)
Cargo vessels	7	10	0	($36.50)
Serangs	10	0	0	($48.66)
Tindals, paniwallas, cassabs, seacunnies, donkeymen, winchmen, and lampmen	7	10	0	($36.50)
Lascars, firemen, trimmers, topasses, bhandaries, barbers, etc	4	0	0	($19.47)
FISHING VESSELS.				
Skipper	30	0	0	($145.99)
Second hand	15	0	0	($72.99)
Enginemen	10	0	0	($48.66)
Deck hand, fireman, cook, etc	7	10	0	($36.50)

AMOUNTS PAID FROM GOVERNMENT FUNDS.

The excess of payments by the Government over receipts from premiums is shown in the following table:

Month.	1915	1916	1917
January	.....	$22,040	$80,545
February	.....	11,276	112,090
March	[1] $14,200	18,026	135,897
April	[1] 10,547	27,978	143,596
May	[1] 9,042	38,027	299,251
June	[1] 9,027	20,814	282,904
July	[1] 1,533	7,446	315,481
August	9,349	31,520	338,022
September	17,140	20,391	283,006
October	13,884	28,922	234,857
November	17,738	88,940	218,632
December	16,473	70,472	264,811

[1] Surplus of receipts over payments.

For the five months, March to July, 1915, there was a surplus of premiums over the compensation payments made. The average monthly amounts by which the Government payments exceeded the receipts were $3,017 in 1915, $32,158 in 1916, and $195,677 in January–July, 1917. In August, 1917, the amount was $338,022, and for the four months September to December, 1917, it averaged $250,328.

COMPENSATION TO GERMAN WORKMEN IDLE ON ACCOUNT OF LACK OF COAL.[1]

The German Metal Workers' Federation and the general commission of the German Free Trade Unions recently submitted to the Imperial Government a petition requesting compensation for the male and female workers temporarily idle owing to lack of coal. Negotiations in this respect subsequently took place between the secretary of state of the imperial economic office (*Reichswirtschaftsamt*) and representatives of the various trade-union central organizations, of the federation of German employers' associations, and of the Berlin metal industries. The war office and the imperial treasury were also represented. After protracted discussions an agreement was reached as to the regulation and amount of the proposed compensation. The agreement covers only armament and food industries important for the conduct of the War. As the Government is greatly interested that establishments of this kind, after a temporary shutdown due to lack of coal, resume full operation as soon as their supply of coal will permit, it has declared itself ready to appropriate imperial funds for the payment of compensation to idle workmen. At its sitting of January 31, 1918, the Federal Council (*Bundesrat*) approved the

[1] Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands, vol. 28, No. 7. Berlin, Feb. 16, 1918.

agreement concluded in the imperial economic office and resolved that imperial subsidies shall be granted only when compensation is paid on the basis of that agreement. The agreement and the provisions of the Federal Council relate only to shutdowns and restricted operation of establishments occurring between January 2 and March 31, 1918, and directly or indirectly due to lack of coal. The latter condition is also to be considered as complied with if an establishment was not able to obtain the half-finished products required for its operation on account of lack of coal in another establishment. In doubtful cases the war office is to decide whether a shutdown was due to lack of coal.

The employers' representatives obligated themselves to see to it that all establishments concerned declare their adherence to the agreement and live up to it. The war office has declared itself ready to use its influence that the compensation of workmen on account of idleness due to lack of coal shall everywhere be enforced in accordance with the above agreement. The imperial subsidies, which are expected to amount to a considerable sum, will only be granted in those cases of forced idleness in which the employers regulate the compensation of their workmen according to prescribed regulations.

LEGISLATION REGARDING SMALL HOLDINGS FOR WAR VICTIMS IN FRANCE.

A recent French law,[1] dated April 9, extends special credit facilities to pensioned soldiers or their widows and civilian victims of the War for the purpose of acquiring small agricultural holdings. The law largely modifies existing legislation of that character in the interest of the special class of persons indicated. Under existing law [2] individual borrowers may secure the use of Government funds through duly constituted real credit associations for the purchase of agricultural holdings not exceeding 1 hectare (2.47 acres) in area in connection with a cottage. The special beneficiaries of this new law are granted (1) lower rates of interest, 1 per cent as against 3.5 per cent under existing laws; (2) exemption from the requirement of a first cash payment of 20 per cent of the value of the property to be purchased; (3) right to purchase a small holding up to a value of 10,000 francs ($1,930), regardless of the size of the holding (the limitation under the law of April 10, 1908, was a holding of 1 hectare in area—2.47 acres); and (4) a period of 25 years in which to

[1] Loi relative à l'acquisition de petities propriétés rurales par les pensionnés militaires et victimes civiles de la guerre. Journal Officiel, Apr. 10, 1918.

[2] Cf. Bulletin 158 of this bureau. Government aid to home owning and housing of the working people in foreign countries. Washington, 1915, pp. 138, 139.

liquidate the loan by annual installments, provided the borrower shall not be more than 60 years of age at the time of the last payment.

Other requirements under the new law are similar to those under existing legislation, such as, for instance, that the purchaser must deposit with the State insurance institute a single premium on a term policy running for the period of his mortgage as a guaranty of the payment of the mortgage in case of death before completing payments thereon; and that he must produce a certificate from a local housing committee to the effect that all sanitary and other requirements of law have been complied with.

PROVISION FOR DISABLED SOLDIERS.

VOCATIONAL REEDUCATION FOR WAR CRIPPLES IN FRANCE.

Authoritative information concerning recent progress in the work of rehabilitation of the disabled in France has been difficult to obtain. A report entitled "Vocational Reeducation for War Cripples in France,"[1] by Miss Grace S. Harper, and recently published by the Red Cross Institute for Crippled and Disabled Men, clarifies to a considerable degree some of the obscurities in the information heretofore available about the development of the French system. Concerning the purpose and scope of the report, Miss Harper says:

> It was undertaken after an inspection of the principal French centers of reeducation and with the intention of forming a basis for judgment on two points: (1) How the American Red Cross can aid in the problem of reeducation for French mutilés, and (2) what material on schools, their organization and equipment, may be of use in America.

The report includes an analysis of the French system and methods of reeducation, of the provision for pensions and allowances, and of employment arrangements; a description of the orthopedic centers at Paris, Tours, Bordeaux, Toulouse, Montpellier, Marseille, and Lyon, which combine functional readaptation and vocational reeducation, and of certain departmental, municipal, and private schools. State provision of artificial limbs and special apparatus for disabled soldiers is also considered.

Excerpts from the report follow:

Functional Reeducation.

No man is discharged from the French Army until his cure is as complete as possible; therefore the Service de Santé has under its care convalescent cripples who, though still requiring treatment of one kind or another, may be physically capable of working at certain trades. In 1916, plans were made for providing vocational reeducation for disabled soldiers while they were receiving care in centers of physiotherapy (military hospitals specializing in treatment for the restoration of physical functions). As a therapeutic measure occupation causes the cripple involuntarily to exercise his muscles in a way that purely mechanical aids do not accomplish. Because of this gain in functional readaptation vocational training rightly commences while the mutilé is still under hospital care. The Service de Santé has not only recognized the advantages of occupation as a curative measure, but also its counterinfluence against the ill effects produced by enforced idleness during convalescence.

[1] Vocational Reeducation for War Cripples in France, by Miss Grace S. Harper. New York, Red Cross Institute for Crippled and Disabled Men. 1918. 98 pp. (Publications of the Red Cross Institute for Crippled and Disabled Men. Ser. 2, No. 1.)

Vocational Reeducation.

At the present time the total number of schools which provide some form of vocational reeducation is 103. These vary greatly in size, in the scope of their activities, and in their value. Some have so few pupils that they may almost be said to operate on paper only. The larger ones provide for receiving 200 to 300 mutilés, while many can not accommodate more than 10 to 15 men. The larger schools are located in or near the important cities, Paris, Bordeaux, Lyon, Marseille, Clermont-Ferrand, etc. Smaller schools are scattered throughout 82 of the 87 Departments of France. Mutilés from invaded districts are welcomed in all of these centers. It is difficult to estimate the number of cripples that can be educated yearly in these schools, partly because, owing to incomplete registration, the total number of mutilés that the schools can accommodate is not known, also because the periods of training vary according to the trade. Some schools have for the same occupation longer or shorter durations of apprenticeship than have others. Some centers are able to retain their men until they finish their courses, while at others soldiers leave as soon as they are discharged from the army. For this reason the yearly "turnover" for all the schools can not be accurately determined. The national office places the figures for the number of men who can be reeducated annually at from 7,000 to 8,000. This number compared to the approximated 300,000 war cripples to date,[1] with the monthly increase of 6,000 to 7,000, leaves a great lack in the extent of training available for even a portion of those who will probably need it.

Perhaps the greatest problem confronting France now and when the War shall end will be—not is there sufficient provision for giving training to disabled soldiers, but will they accept the offer to be reeducated? Less than 4 per cent of the total number of the disabled have shown a desire to profit by learning new trades, and this figure includes even mutilés who are being reeducated while still in military hospitals, and who are therefore not wholly free as to choice.

France is sometimes referred to as having made it obligatory for her soldiers to be reeducated in order to become self-supporting. This is true in that reeducation may begin while the mutilé is still under military authority and therefore must obey orders, whether it be orders for surgical treatment or for vocational training. But because his "reform," or honorable discharge, may be granted before a course of training is completed, and because after "reform" he is free to do as he pleases, this can hardly be considered as obligatory training in its broadest sense. Undoubtedly some means will have to be found by which reeducation can be made to hold a greater appeal to disabled men. So far the French mutilé thinks of little else than getting back to his home, and quite naturally so after three or more years of separation from his family. A sympathetic understanding of this state of mind on the part of the wounded soldier is essential to any effective plans for giving him help.

Employment.

At present there is little difficulty in finding employment for disabled men, and this is especially true of mutilés who have been reeducated in vocational schools. The problem of finding situations for their graduates has not as yet become an urgent one for schools to consider in connection with the trained mutilés. Because of the scarcity of labor in the country, large numbers of untrained cripples are working at good wages in munition factories and other branches of industry. When the War is over and able-bodied mobilized men return to their former employments there will naturally follow a weeding out of the physically unfit and unskilled in industry. Yet an appreciable number of these may not lose their positions at once, owing to the probable added demand that there will be for labor in reconstruction work.

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[1] France, Office National des Mutilés et Réformés de la Guerre. Bulletin No. 1.

Those most deeply interested in the problem of reeducation and employment dwell repeatedly on the present tendency of employers to accept crippled soldiers because of the sentiment which is alive to their sacrifice for their country. They feel that this incentive will rapidly disappear when the War is over and that even now there is a noticeable diminution in the sympathetic attitude of the public toward crippled soldiers. Strong sentiment exists against the crippled soldier being regarded as a class apart, either by himself or by others. The minister of labor has especially instructed placement agents not to separate disabled men from the physically normal in industry. With the provisions which have been made by the State for accident insurance for war cripples, it is generally felt that disabled soldiers should be received into industries in competition with valid workmen and on a basis of equal pay for equal work. Because this can be accomplished only through reeducation of those whose disability prevents them from continuing their former occupations, employment groups are urged to recommend soldiers to reeducational schools whenever it is thought advisable that they should undergo training.

Special war measures have been taken in France to meet the need of finding employment for disabled soldiers. By ministerial decree and in agreement with the ministry of labor, the war office has established a national placement service, which is located at Paris and works in connection with the national office. In nearly all of the French Departments separate employment bureaus have been organized for mutilés. These bureaus work directly with the national placement service. The préfets of Departments are presidents of these bureaus, which are independent of civil Department placement committees coming under the ministry of labor, and which also have their central office at Paris. From February, 1916, when the placement service was opened, to October, 1917, 12,957 situations had been found for mutilés. During the last nine months, when the system had become well established, the average number of placements per month was 432. During the first nine months after the service had been established 1,500 mutilés had been placed in munition factories and about 3,000 in other factories working for national defense.

The national office issues monthly bulletins which give lists of opportunities for work for the disabled in all of the Departments. Each month a list is printed of positions not filled by the mutilés belonging to the various Departments and therefore open to outsiders. In each of these reports, when a place has been filled, the nature of the infirmity of the soldier is mentioned in connection with the kind of work undertaken.

A plan of cooperation has been worked out between the national placement service and 10 large private placement groups working throughout France. Through an interchange of opportunities for employment, these combined societies have made 5,420 placements within a year and a half. Six of these private societies work chiefly in the Department of the Seine. A daily bulletin is issued by the national office for the use of this cooperative group. The bulletin contains a list of offers of employment made to different societies, but as yet unfilled. Indications of the occupation, wages, and requirements of the position open are stated. The society to whom the offer was originally made deals directly with cripples sent by other societies as candidates for the place. Each offer of employment is listed by number and canceled by number when filled. In this way men are not sent to apply for positions which are no longer vacant.

Any disabled soldier may apply at the national placement office for work. A physician who is in regular attendance examines each applicant and studies his physical capabilities for such employment as may be suggested by the placement agents. Individual records are kept; these give information on the military status of the mutilé, his family, education, former employment, and nature of work desired. Under physical conditions are noted the nature of his disability, general health, and

aptitude for work. A careful system of "follow up" has been worked out which checks up the final connection between the national office, the employer, and the applicant for work.

Compensation to War Cripples who may Become Victims of Industrial Accidents.

By the law of November 25, 1916, it has been enacted that whenever a crippled soldier or sailor whose physical disabilities have been received during the present war shall sustain injury through work, and under conditions falling within the industrial accident laws now active in France, compensation shall be paid in case of death or of permanent reduction in working capacity. It must be proved that the accident was caused exclusively by the preexisting war disability, and in case of permanent reduction of working capacity resulting from accident that this has been aggravated in some definite degree by the fact of the preexisting disability. Employers of such men are not required to pay the total compensation in case of death nor the quota of the amount of compensation due in case of aggravated disability.

To meet these compensation payments a special State welfare fund has been created, to which employers and insurance organizations are obliged to contribute amounts fixed each year according to recent laws governing industrial accident insurance.

As employers and insurance companies are taxed regardless of whether they are dealing with war cripples or not this law overcomes in a measure the tendency to exclude them from industry on the grounds of a predisposition to accident such as would involve an increase in insurance premiums and in the amount of compensation to be borne.

Law Reserving Certain Civil Employment for Disabled Soldiers.

The law reserving certain Government positions under special conditions for crippled soldiers and sailors has, perhaps, indirectly caused more harm to the ones hoping to benefit by it than seems evident at first. By this law, and for a period of five years after the War shall end, war cripples will be given the right of preference for obtaining any of a given list of occupations specially outlined as not requiring the whole of a man's physical powers. This preference will be given always in favor of fathers of large families.

A special regulation determines the sort of injuries that allow a man the right to apply for these positions, which include Government employment and reservation of certain places in all commercial and industrial enterprises which benefit by being given a monopoly, or receiving a subsidy from the State, Departments, or communes. In the future no industrial or commercial enterprise can obtain a monopoly or subsidy from public authorities except on condition of reserving for disabled soldiers and sailors such special employments as are specified.

The estimated number of positions listed up to the end of the five-year period following cessation of hostilities is 40,000. At the expiration of this time it is not obligatory that cripples be retained in places which they may be occupying. So far so good. But on the other hand the enactment of this law has unquestionably decreased the number of mutilés who might otherwise have applied for reeducational training, since many of them are looking forward to easy positions under the specifications of the law. There is a strong feeling that most of these opportunities should be granted to cases of arm amputation or injury, the number of which would of itself exceed the available openings.

Pending Legislation.

Of the proposed laws affecting the interests of war cripples the most significant is the new pension bill drawn up by the special commission on civil and military pensions appointed by the Government.

This bill provides for the revision and increase of pension schedules and for the reclassification of injuries and disabilities according to the resulting degree of incapacity for self-support in one's own trade. This degree of incapacity for work in a particular trade is recognized here as the only logical criterion for estimating the amount of damage sustained by each individual. A watchmaker or a tailor, for example, can obviously continue at his trade with the handicap of an amputated leg, whereas the same injury necessitates an entire change of occupation for a builder, an interior decorator, or sign hanger.

In case of total incapacity necessitating the assistance of an attendant a fixed sum of 255 francs [$49.22] per annum is allowed in addition to the pension. This augmentation is renewable under the same conditions as "renewable allowances." A later modification to the bill provides for an additional payment for each legitimate or acknowledged child under 16 years of age. It also takes into account the rights and needs of the disabled for whom special allowances should be granted under certain conditions.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

The retail price of food, as a whole, on April 15, 1918, shows no change from March 15, 1918.

The Bureau of Labor Statistics shows relative prices for 16 articles of food. During the month 6 of these articles decreased in price, 1 remained the same, and 7 articles increased. The article showing the greatest decrease is potatoes, being 12 per cent lower in April than in March. Butter decreased 8 per cent; milk, 2 per cent; eggs, 4 per cent; while sugar, lard, and corn meal show a decrease of 1 per cent, each. The price of flour remained the same. On April 15 all meats were higher than on the 15th of the month previous. Rib roast was 10 per cent higher; sirloin steak and round steak increased 8 per cent, each; pork chops increased 6 per cent; bacon and ham, 1 per cent, each. Bread increased 2 per cent during the month.

The following table shows the retail price of food in the United States on March 15 and April 15, 1918:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAR. 15, 1918, AND APR. 15, 1918.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price.		Relative price.	
		Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.
Sirloin steak	Pound	$0.338	$0.366	133	144
Round steak	do	.318	.345	143	155
Rib roast	do	.268	.293	135	148
Chuck roast	do	.232	.255		
Plate beef	do	.182	.199		
Pork chops	do	.339	.356	161	170
Bacon	do	.488	.495	181	183
Ham	do	.441	.446	164	166
Lard	do	.332	.331	210	209
Salmon, canned	do	.295	.295		
Eggs	Dozen	.443	.425	128	123
Butter	Pound	.552	.507	144	132
Cheese	do	.351	.341		
Milk	Quart	.134	.132	151	148
Bread	16-oz. loaf[1]	.084	.086	168	172
Flour	Pound	.066	.066	200	200
Corn meal	do	.072	.071	246	237
Rice	do	.120	.121		
Potatoes	do	.025	.022	147	129
Onions	do	.040	.033		
Beans, navy	do	.181	.180		
Prunes	do	.165	.166		
Raisins, seeded	do	.151	.151		
Sugar	do	.092	.091	167	165
Coffee	do	.304	.301		
Tea	do	.615	.639		
All articles combined				154	154

[1] 16 ounces, weight of dough.

In the year from April 15, 1917, to April 15, 1918, the price of food as a whole in the United States advanced 6 per cent. Four articles show a decline in price: Potatoes of 62 per cent, sugar of 6 per cent, flour of 3 per cent, and butter of 1 per cent. The greatest increase, or 54 per cent, was in corn meal. Increases from 22 per cent to 30 per cent are shown in four articles. Ham increased 22 per cent; lard, 25 per cent; bacon and milk, 30 per cent, each. The six other articles increased from 10 to 19 per cent. These increases are, in detail, as follows: Eggs, 10 per cent; bread and sirloin steak, 15 per cent each; pork chops, 16 per cent; rib roast, 17 per cent; and round steak, 19 per cent.

In the five-year period, April, 1913, to April, 1918, food as a whole shows an increase of 57 per cent. No article increased in price less than 25 per cent. This lowest increase was in butter. Every other article increased 43 per cent and over. The increases in 11 articles ranged from 43 per cent to 85 per cent. Three articles—flour, lard, and corn meal—increased 100 per cent, 109 per cent, and 142 per cent, respectively.

The following table gives the average and the relative retail price of food in the United States on April 15 of each year, 1913 to 1918, inclusive:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON APR. 15 OF EACH YEAR, 1913 TO 1918, INCLUSIVE.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price Apr. 15.						Relative price Apr. 15.					
		1913	1914	1915	1916	1917	1918	1913	1914	1915	1916	1917	1918
Sirloin steak	Pound	$0.254	$0.254	$0.251	$0.270	$0.317	$0.366	101	100	99	106	125	144
Round steak	do	.223	.230	.223	.240	.289	.345	99	103	100	108	130	155
Rib roast	do	.199	.201	.197	.210	.252	.293	101	102	100	106	127	148
Chuck roast	do	.....	.170	.160	.212	.212	.255	.....	.....	.....	.....	.....	.....
Plate beef	do	.....	.124	.122	.128	.161	.199	.....	.....	.....	.....	.....	.....
Pork chops	do	.216	.216	.197	.225	.306	.356	103	103	94	107	146	170
Bacon	do	.267	.267	.264	.281	.382	.495	99	99	98	104	141	183
Ham	do	.265	.268	.253	.312	.365	.446	99	99	94	116	136	166
Lard	do	.158	.156	.151	.187	.261	.331	100	99	96	119	167	209
Salmon, canned	do	.....	.....	.198	.200	.236	.295	.....	.....	.....	.....	.....	.....
Eggs	Dozen	.251	.255	.259	.274	.386	.425	73	74	75	79	112	123
Butter	Pound	.406	.327	.359	.414	.508	.507	106	86	94	108	133	132
Cheese	do	.....	.....	.232	.248	.330	.341	.....	.....	.....	.....	.....	.....
Milk	Quart	.088	.089	.088	.088	.102	.132	100	100	99	99	114	148
Bread	16-oz. loaf[1]	.050	.055	.063	.062	.075	.086	100	110	126	124	150	172
Flour	Pound	.....	.....	.....	.....	.....	.066	100	99	137	119	246	209
Corn meal	do	.030	.031	.033	.033	.047	.071	98	103	109	108	154	237
Rice	do	.....	.....	.091	.091	.095	.121	.....	.....	.....	.....	.....	.....
Potatoes	do	.....	.....	.....	.....	.....	.022	87	105	86	138	334	129
Onions	do	.....	.....	.036	.048	.134	.033	.....	.....	.....	.....	.....	.....
Beans, navy	do	.....	.....	.077	.094	.167	.189	.....	.....	.....	.....	.....	.....
Prunes	do	.....	.....	.137	.133	.145	.166	.....	.....	.....	.....	.....	.....
Raisins, seeded	do	.....	.....	.125	.125	.142	.151	.....	.....	.....	.....	.....	.....
Sugar	do	.054	.050	.066	.079	.096	.094	98	91	122	145	175	165
Coffee	do	.....	.....	.299	.299	.299	.301	.....	.....	.....	.....	.....	.....
Tea	do	.....	.....	.546	.546	.551	.639	.....	.....	.....	.....	.....	.....
All articles combined		.....	.....	.....	.....	.....	.....	**98**	**97**	**99**	**109**	**145**	**154**

[1] 16 ounces, weight of dough.

The next table gives average retail prices on March 15, 1918, and on April 15, 1913, 1914, 1917, and 1918, in 16 of the larger cities. The prices for Atlanta, Ga., are not included because over 20 per cent of the firms on the bureau's list failed to send in their report.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 16 SELECTED CITIES, ON APR. 15, 1913, 1914, AND 1917, MAR. 15, 1918, AND APR. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau, by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		Apr. 15.			Mar. 15.	Apr. 15.	Apr. 15.			Mar. 15.	Apr. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	(1)	(1)	(1)	(1)	(1)	$0.240	$0.240	$0.316	$0.338	$0.370
Round steak	do	(1)	(1)	(1)	(1)	(1)	.227	.220	.298	.329	.369
Rib roast	do	(1)	(1)	(1)	(1)	(1)	.187	.180	.236	.268	.298
Chuck roast	do	(1)	(1)	(1)	(1)	(1)	.....	.153	.218	.237	.265
Plate beef	do	(1)	(1)	(1)	(1)	(1)	.....	.133	.176	.189	.217
Pork chops	do	(1)	(1)	(1)	(1)	(1)	.210	.192	.288	.343	.376
Bacon, sliced	do	(1)	(1)	(1)	(1)	(1)	.227	.238	.387	.446	.457
Ham, sliced	do	(1)	(1)	(1)	(1)	(1)	.310	.300	.400	.482	.486
Lard	do	(1)	(1)	(1)	(1)	(1)	.143	.144	.263	.325	.326
Lamb	do	(1)	(1)	(1)	(1)	(1)	.205	.185	.275	.337	.361
Salmon, canned	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.208	.256	.260
Eggs, strictly fresh	Dozen	(1)	(1)	(1)	(1)	(1)	.217	.224	.370	.421	.402
Butter	Pound	(1)	(1)	(1)	(1)	(1)	.429	.351	.516	.583	.545
Cheese	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.338	.364	.357
Milk	Quart	(1)	(1)	(1)	(1)	(1)	.088	.087	.092	.130	.130
Bread	16 ounces [2]	(1)	(1)	(1)	(1)	(1)	.048	.050	.067	.084	.084
Flour	Pound	(1)	(1)	(1)	(1)	(1)	.032	.032	.068	.068	.066
Corn meal	do	(1)	(1)	(1)	(1)	(1)	.024	.025	.040	.067	.066
Rice	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.103	.117	.118
Potatoes	do	(1)	(1)	(1)	(1)	(1)	.015	.019	.063	.027	.022
Onions	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.124	.041	.026
Beans, navy	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.158	.184	.183
Prunes	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.139	.169	.166
Raisins	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.143	.149	.152
Sugar	do	(1)	(1)	(1)	(1)	(1)	.048	.044	.088	.087	.085
Coffee	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.235	.285	.286
Tea	do	(1)	(1)	(1)	(1)	(1)	.....	.....	.550	.633	.679
		Boston, Mass.					Buffalo, N. Y.				
Sirloin steak	do	$0.363	$0.327	$0.420	$0.423	$0.457	$0.223	$0.216	$0.290	$0.324	$0.339
Round steak	do	.340	.343	.403	.423	.465	.193	.194	.268	.301	.314
Rib roast	do	.244	.244	.291	.298	.329	.175	.168	.225	.257	.271
Chuck roast	do	.....	.168	.242	.249	.274	.....	.154	.203	.234	.245
Plate beef	do	.....	.....	.....	.....	.....	.....	.118	.163	.179	.186
Pork chops	do	.238	.230	.326	.346	.363	.208	.210	.330	.342	.361
Bacon, sliced	do	.250	.250	.375	.463	.466	.215	.212	.363	.448	.455
Ham, sliced	do	.305	.313	.398	.453	.469	.257	.253	.383	.453	.462
Lard	do	.160	.156	.265	.335	.329	.143	.140	.250	.323	.323
Lamb	do	.243	.213	.295	.334	.364	.187	.162	.248	.301	.333
Salmon, canned	do	.....	.....	.248	.308	.307	.....	.....	.207	.288	.287
Eggs, strictly fresh	Dozen	.310	.330	.451	.546	.529	.252	.257	.395	.468	.434
Butter	Pound	.421	.340	.505	.558	.507	.402	.314	.494	.540	.491
Cheese	do	.....	.....	.336	.335	.334	.....	.....	.315	.345	.338
Milk	Quart	.089	.089	.110	.145	.145	.080	.080	.100	.140	.130
Bread	16 ounces [2]	.052	.052	.074	.080	.080	.050	.045	.083	.083	.088
Flour	Pound	.037	.038	.075	.070	.070	.030	.030	.065	.064	.063
Corn meal	do	.035	.035	.056	.079	.080	.025	.026	.046	.078	.078
Rice	do	.....	.....	.101	.123	.123	.....	.....	.095	.123	.125
Potatoes	do	.015	.020	.061	.025	.025	.013	.017	.060	.024	.022
Onions	do	.....	.....	.140	.043	.035	.....	.....	.177	.040	.034
Beans, navy	do	.....	.....	.171	.186	.186	.....	.....	.164	.184	.184
Prunes	do	.....	.....	.153	.170	.172	.....	.....	.132	.175	.176
Raisins	do	.....	.....	.147	.149	.151	.....	.....	.122	.142	.141
Sugar	do	.051	.049	.092	.093	.092	.054	.048	.093	.098	.096
Coffee	do	.....	.....	.340	.341	.341	.....	.....	.285	.305	.302
Tea	do	.....	.....	.624	.638	.639	.....	.....	.475	.570	.570

[1] No averages are shown for this city because over 20 per cent of the firms on the bureau's list failed to report for April 15, 1918.
[2] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 16 SELECTED CITIES, ON APR. 15, 1913, 1914, AND 1917, MAR. 15, 1918, AND APR. 15, 1918—Continued.

Article.	Unit.	Chicago, Ill.					Cleveland, Ohio.				
		Apr. 15.			Mar. 15.	Apr. 15.	Apr. 15.			Mar. 15.	Apr 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.223	$0.244	$0.292	$0.303	$0.337	$0.250	$0.250	$0.305	$0.318	$0.352
Round steak	do	.190	.213	.233	.274	.304	.218	.223	.283	.301	.334
Rib roast	do	.197	.201	.241	.255	.288	.200	.196	.245	.259	.281
Chuck roast	do	.....	.161	.205	.220	.249	.....	.171	.220	.239	.261
Plate beef	do	.....	.120	.155	.169	.194	.....	.121	.158	.184	.197
Pork chops	do	.195	.198	.285	.309	.330	.213	.224	.330	.336	.352
Bacon, sliced	do	.314	.313	.395	.492	.519	.270	.278	.400	.483	.488
Ham, sliced	do	.325	.317	.382	.450	.467	.360	.350	.390	.469	.467
Lard	do	.149	.150	.252	.321	.317	.165	.163	.272	.328	.330
Lamb	do	.207	.200	.263	.316	.356	.215	.197	.288	.323	.343
Salmon, canned	do	.....	.....	.260	.286	.301	.....	.....	.215	.285	.286
Eggs, strictly fresh	Dozen	.229	.218	.376	.407	.380	.236	.241	.399	.446	.415
Butter	Pound	.390	.301	.484	.506	.460	.420	.337	.543	.539	.496
Cheese	do	.....	.....	.327	.381	.353	.....	.....	.322	.340	.338
Milk	Quart	.080	.080	.100	.119	.119	.083	.080	.100	.130	.130
Bread	16 ounces[1]	.054	.054	.076	.089	.089	.049	.050	.075	.081	.086
Flour	Pound	.027	.029	.064	.064	.062	.031	.032	.066	.067	.067
Corn meal	do	.029	.028	.050	.071	.072	.027	.029	.045	.071	.071
Rice	do	.....	.....	.092	.124	.122	.....	.....	.094	.121	.120
Potatoes	do	.013	.017	.058	.020	.017	.014	.019	.059	.022	.021
Onions	do	.....	.....	.126	.036	.028	.....	.....	.130	.034	.029
Beans, navy	do	.....	.....	.170	.184	.178	.....	.....	.173	.177	.176
Prunes	do	.....	.....	.148	.165	.163	.....	.....	.146	.173	.172
Raisins	do	.....	.....	.147	.150	.150	.....	.....	.139	.146	.146
Sugar	do	.050	.049	.092	.087	.087	.052	.050	.097	.089	.090
Coffee	do	.....	.....	.290	.286	.281	.....	.....	.288	.300	.298
Tea	do	.....	.....	.530	.583	.569	.....	.....	.500	.595	.596
		Denver, Colo.					Detroit, Mich.				
Sirloin steak	do	$0.231	$0.229	$0.273	$0.307	$0.367	$0.238	$0.244	$0.282	$0.321	$0.344
Round steak	do	.203	.210	.258	.286	.345	.194	.205	.244	.293	.318
Rib roast	do	.174	.174	.221	.238	.276	.192	.200	.250	.271	.288
Chuck roast	do	.....	.158	.189	.217	.252	.....	.158	.190	.224	.248
Plate beef	do	.....	.097	.124	.152	.181	.....	.116	.144	.181	.192
Pork chops	do	.199	.200	.296	.330	.344	.196	.204	.274	.331	.339
Bacon, sliced	do	.290	.274	.381	.518	.533	.228	.232	.372	.474	.478
Ham, sliced	do	.292	.292	.386	.489	.505	.250	.280	.300	.428	.446
Lard	do	.163	.158	.243	.344	.346	.160	.160	.254	.335	.331
Lamb	do	.181	.165	.240	.297	.331	.174	.179	.260	.327	.370
Salmon, canned	do	.....	.....	.197	.280	.287	.....	.....	.218	.290	.293
Eggs, strictly fresh	Dozen	.246	.236	.381	.415	.412	.232	.233	.396	.449	.413
Butter	Pound	.390	.293	.476	.497	.448	.379	.312	.486	.526	.475
Cheese	do	.....	.....	.339	.357	.361	.....	.....	.305	.350	.322
Milk	Quart	.084	.084	.087	.115	.115	.080	.080	.110	.140	.130
Bread	16 ounces[1]	.047	.048	.077	.086	.086	.050	.049	.075	.084	.083
Flour	Pound	.026	.026	.061	.056	.057	.031	.031	.064	.068	.069
Corn meal	do	.024	.026	.040	.060	.061	.028	.029	.051	.074	.073
Rice	do	.....	.....	.097	.120	.125	.....	.....	.086	.122	.124
Potatoes	do	.011	.014	.059	.020	.016	.012	.016	.054	.021	.017
Onions	do	.....	.....	.142	.034	.030	.....	.....	.131	.044	.038
Beans, navy	do	.....	.....	.147	.173	.172	.....	.....	.170	.179	.179
Prunes	do	.....	.....	.142	.168	.165	.....	.....	.134	.170	.175
Raisins	do	.....	.....	.140	.147	.145	.....	.....	.133	.141	.145
Sugar	do	.053	.047	.093	.092	.092	.050	.050	.093	.088	.088
Coffee	do	.....	.....	.289	.295	.307	.....	.....	.275	.301	.304
Tea	do	.....	.....	.550	.576	.583	.....	.....	.450	.547	.582

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 16 SELECTED CITIES, ON APR. 15, 1913, 1914, AND 1917, MAR. 15, 1918, AND APR. 15, 1918—Continued.

Article.	Unit.	Milwaukee, Wis.					New Orleans, La.				
		Apr. 15.			Mar. 15.	Apr. 15.	Apr. 15.			Mar. 15.	Apr. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.215	$0.230	$0.292	$0.303	$0.330	$0.221	$0.232	$0.260	$0.301	$0.317
Round steak	do	.195	.210	.266	.288	.313	.193	.200	.235	.259	.286
Rib roast	do	.180	.185	.238	.249	.270	.209	.207	.231	.253	.283
Chuck roast	do	.....	.163	.216	.229	.251	.....	.154	.186	.199	.224
Plate beef	do	.....	.118	.154	.173	.188	.....	.124	.154	.172	.184
Pork chops	do	.195	.195	.292	.311	.334	.225	.239	.305	.350	.364
Bacon, sliced	do	.268	.273	.378	.482	.485	.291	.300	.410	.500	.501
Ham, sliced	do	.268	.277	.362	.451	.453	.276	.260	.363	.438	.416
Lard	do	.154	.158	.269	.328	.331	.148	.149	.254	.336	.325
Lamb	do	.200	.192	.293	.328	.354	.....	.211	.300	.319	.354
Salmon, canned	do	.....	.....	.236	.284	.290	.....	.....	.250	.328	.310
Eggs, strictly fresh	Dozen	.212	.214	.353	.411	.375	.219	.220	.368	.395	.382
Butter	Pound	.382	.300	.508	.514	.465	.403	.322	.532	.549	.508
Cheese	do	.050	.051	.315	.354	.303	.....	.....	.340	.345	.337
Milk	Quart	.070	.070	.080	.110	.100	.109	.097	.100	.143	.142
Bread	16 ounces[1]	.050	.051	.077	.076	.080	.....	.043	.073	.073	.077
Flour	Pound	.031	.031	.068	.065	.064	.038	.036	.070	.070	.073
Corn meal	do	.033	.033	.058	.082	.082	.026	.028	.048	.060	.063
Rice	do	.....	.....	.109	.120	.124	.....	.....	.088	.110	.107
Potatoes	do	.012	.016	.062	.019	.016	.019	.021	.062	.034	.025
Onions	do	.....	.....	.137	.038	.026	.....	.....	.133	.037	.030
Beans, navy	do	.....	.....	.170	.183	.184	.....	.....	.170	.173	.167
Prunes	do	.....	.....	.157	.159	.158	.....	.....	.142	.155	.160
Raisins	do	.....	.....	.148	.146	.151	.....	.....	.143	.154	.154
Sugar	do	.053	.048	.093	.089	.089	.052	.048	.092	.088	.088
Coffee	do	.....	.....	.283	.270	.270	.....	.....	.284	.261	.248
Tea	do	.....	.....	.565	.606	.623	.....	.....	.630	.637	.581

Article.	Unit.	New York, N. Y.					Philadelphia, Pa.				
Sirloin steak	do	$0.261	$0.261	$0.318	$0.346	$0.380	$0.300	$0.300	$0.358	$0.398	$0.433
Round steak	do	.251	.255	.315	.357	.384	.252	.259	.326	.374	.399
Rib roast	do	.226	.216	.270	.296	.324	.224	.218	.269	.303	.330
Chuck roast	do	.....	.160	.210	.233	.259	.....	.176	.235	.260	.286
Plate beef	do	.....	.148	.188	.221	.242	.....	.119	.157	.190	.201
Pork chops	do	.227	.219	.319	.349	.367	.224	.221	.329	.356	.380
Bacon, sliced	do	.249	.251	.368	.457	.467	.254	.257	.375	.466	.479
Ham, sliced	do	[2] .202	[2] .197	[2] .272	[2] .333	[2] .337	.307	.296	.423	.489	.499
Lard	do	.159	.156	.263	.334	.334	.153	.151	.260	.334	.334
Lamb	do	.190	.164	.249	.301	.318	.208	.196	.286	.326	.364
Salmon, canned	do	.....	.....	.285	.353	.357	.....	.....	.204	.265	.267
Eggs, strictly fresh	Dozen	.302	.319	.424	.501	.476	.249	.253	.397	.460	.440
Butter	Pound	.409	.321	.513	.527	.493	.473	.375	.548	.592	.562
Cheese	do	.....	.....	.335	.344	.338	.....	.....	.344	.377	.369
Milk	Quart	.090	.090	.109	.146	.140	.080	.080	.090	.132	.120
Bread	16 ounces[1]	.053	.054	.079	.079	.086	.043	.043	.064	.071	.074
Flour	Pound	.032	.032	.069	.078	.070	.031	.031	.066	.070	.071
Corn meal	do	.034	.034	.057	.082	.084	.027	.027	.040	.076	.075
Rice	do	.....	.....	.091	.119	.121	.....	.....	.097	.131	.129
Potatoes	do	.024	.024	.068	.036	.035	.021	.025	.068	.028	.029
Onions	do	.....	.....	.133	.038	.036	.....	.....	.141	.039	.036
Beans, navy	do	.....	.....	.162	.183	.182	.....	.....	.155	.184	.182
Prunes	do	.....	.....	.145	.171	.174	.....	.....	.145	.171	.168
Raisins	do	.....	.....	.138	.149	.147	.....	.....	.130	.142	.144
Sugar	do	.049	.044	.087	.088	.088	.049	.042	.084	.088	.087
Coffee	do	.....	.....	.265	.266	.267	.....	.....	.275	.279	.273
Tea	do	.....	.....	.494	.528	.527	.....	.....	.589	.587	.581

[1] Loaf; 16 ounces, weight of dough.

[2] Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 16 SELECTED CITIES, ON APR. 15, 1913, 1914, AND 1917, MAR. 15, 1918, AND APR. 15, 1918—Continued.

Article.	Unit.	Pittsburgh, Pa.					St. Louis, Mo.				
		Apr. 15.			Mar. 15.	Apr. 15.	Apr. 15.			Mar. 15.	Apr. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.270	$0.273	$0.329	$0.373	$0.400	$0.234	$0.258	$0.307	$0.317	$0.348
Round steak	do	.232	.242	.304	.347	.373	.214	.232	.290	.312	.342
Rib roast	do	.215	.217	.261	.296	.317	.191	.200	.244	.269	.292
Chuck roast	do	.....	.165	.229	.257	.280	.....	.155	.204	.222	.240
Plate beef	do	.....	.128	.155	.188	.200	.....	.139	.159	.180	.196
Pork chops	do	.232	.230	.320	.347	.378	.188	.202	.306	.300	.328
Bacon, sliced	do	.281	.291	.381	.502	.509	.243	.250	.370	.488	.482
Ham, sliced	do	.298	.299	.397	.478	.483	.257	.275	.376	.467	.470
Lard	do	.154	.156	.264	.330	.329	.138	.126	.250	.303	.299
Lamb	do	.220	.207	.317	.364	.384	.173	.184	.282	.317	.361
Salmon, canned	do	.....	.....	.237	.306	.308	.....	.....	.223	.289	.293
Eggs, strictly fresh	Dozen	.241	.240	.401	.458	.424	.194	.206	.368	.398	.364
Butter	Pound	.426	.340	.528	.568	.513	.388	.320	.531	.563	.499
Cheese	do	.....	.....	.330	.366	.352	.....	.....	.320	.368	.330
Milk	Quart	.088	.092	.103	.135	.135	.080	.080	.100	.120	.120
Bread	16 ounces[1]	.048	.048	.071	.086	.087	.050	.050	.086	.085	.088
Flour	Pound	.031	.032	.071	.068	.067	.029	.029	.066	.061	.062
Corn meal	do	.027	.029	.046	.082	.081	.021	.026	.043	.068	.066
Rice	do	.....	.....	.095	.123	.124	.....	.....	.089	.113	.121
Potatoes	do	.015	.018	.065	.026	.023	.012	.017	.059	.023	.020
Onions	do	.....	.....	.138	.037	.035	.....	.....	.126	.029	.028
Beans, navy	do	.....	.....	.186	.188	.187	.....	.....	.179	.180	.177
Prunes	do	.....	.....	.141	.172	.176	.....	.....	.141	.168	.167
Raisins	do	.....	.....	.147	.146	.147	.....	.....	.149	.169	.167
Sugar	do	.053	.052	.102	.099	.097	.049	.047	.105	.086	.086
Coffee	do	.....	.....	.281	.301	.301	.....	.....	.237	.275	.276
Tea	do	.....	.....	.571	.732	.735	.....	.....	.543	.660	.670
		San Francisco, Cal.					Seattle, Wash.				
Sirloin steak	do	$0.203	$0.207	$0.235	$0.284	$0.291	$0.226	$0.242	$0.246	$0.305	$0.316
Round steak	do	.190	.197	.232	.282	.290	.206	.208	.236	.290	.298
Rib roast	do	.210	.221	.223	.267	.281	.186	.193	.224	.255	.267
Chuck roast	do	.....	.155	.163	.206	.216	.....	.153	.174	.217	.231
Plate beef	do	.....	.150	.156	.198	.205	.....	.125	.140	.184	.196
Pork chops	do	.240	.246	.297	.356	.382	.244	.242	.314	.388	.388
Bacon, sliced	do	.339	.339	.422	.535	.549	.313	.325	.410	.533	.546
Ham, sliced	do	.300	.310	.405	.494	.506	.300	.300	.370	.465	.478
Lard	do	.179	.178	.259	.337	.338	.177	.165	.266	.334	.330
Lamb	do	.175	.180	.243	.314	.321	.204	.193	.268	.328	.337
Salmon, canned	do	.....	.....	.214	.253	.254	.....	.....	.217	.289	.288
Eggs, strictly fresh	Dozen	.232	.271	.374	.433	.419	.250	.257	.369	.456	.441
Butter	Pound	.332	.307	.452	.568	.452	.400	.332	.483	.582	.496
Cheese	do	.....	.....	.297	.326	.335	.....	.....	.300	.308	.310
Milk	Quart	.100	.100	.100	.121	.121	.086	.086	.100	.126	.125
Bread	16 ounces[1]	.051	.052	.061	.084	.084	.049	.051	.086	.086	.088
Flour	Pound	.033	.035	.058	.061	.062	.030	.029	.057	.058	.058
Corn meal	do	.034	.036	.053	.073	.074	.030	.031	.046	.072	.076
Rice	do	.....	.....	.097	.120	.121	.....	.....	.092	.121	.122
Potatoes	do	.012	.017	.052	.023	.022	.008	.011	.038	.016	.016
Onions	do	.....	.....	.102	.026	.022	.....	.....	.118	.034	.033
Beans, navy	do	.....	.....	.161	.159	.157	.....	.....	.162	.169	.173
Prunes	do	.....	.....	.126	.135	.135	.....	.....	.136	.145	.148
Raisins	do	.....	.....	.134	.137	.133	.....	.....	.131	.145	.140
Sugar	do	.052	.049	.091	.088	.086	.059	.054	.094	.091	.091
Coffee	do	.....	.....	.298	.300	.303	.....	.....	.326	.315	.315
Tea	do	.....	.....	.500	.529	.528	.....	.....	.500	.556	.569

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 16 SELECTED CITIES, ON APR. 15, 1913, 1914, AND 1917, MAR. 15, 1918, AND APR. 15, 1918—Concluded.

Article.	Unit.	Washington, D. C.				
		Apr. 15.			Mar. 15.	Apr. 15.
		1913	1914	1917	1918	1918
Sirloin steak	Pound	$0.273	$0.271	$0.324	$0.392	$0.411
Round steak	do	.241	.234	.303	.369	.388
Rib roast	do	.220	.210	.269	.308	.315
Chuck roast	do		.173	.227	.266	.282
Plate beef	do		.125	.178	.196	.209
Pork chops	do	.228	.213	.312	.387	.408
Bacon, sliced	do	.265	.249	.386	.485	.488
Ham, sliced	do	.290	.286	.396	.481	.484
Lard	do	.147	.141	.265	.333	.335
Lamb	do	.233	.201	.285	.368	.388
Salmon, canned	do			.213	.300	.291
Eggs, strictly fresh	Dozen	.226	.236	.383	.443	.442
Butter	Pound	.433	.344	.540	.592	.546
Cheese	do			.329	.363	.356
Milk	Quart	.090	.090	.100	.140	.140
Bread	16 ounces[1]	.050	.049	.074	.082	.082
Flour	Pound	.037	.037	.067	.068	.066
Corn meal	do	.025	.025	.044	.064	.063
Rice	do			.093	.127	.125
Potatoes	do	.015	.018	.036	.029	.025
Onions	do			.125	.039	.036
Beans, navy	do			.166	.191	.190
Prunes	do			.145	.175	.175
Raisins	do			.133	.155	.156
Sugar	do	.049	.048	.090	.089	.088
Coffee	do			.288	.296	.294
Tea	do			.567	.652	.669

[1]Loaf; 16 ounces, weight of dough.

The table on the next page gives average retail prices in 28 smaller cities for March and April, 1918. For Mobile, Ala., and Norfolk, Va., prices are given for April only, as these two cities just began in April to report to the bureau.

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AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON MAR. 15, 1918, AND APR. 15, 1918, IN 30 CITIES.

[The average prices below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Birmingham, Ala.		Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.	
		Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.
Sirloin steak	Pound	$0.349	$0.385	$0.402	$0.437	$0.323	$0.353	$0.312	$0.323	$0.288	$0.320
Round steak	do	.322	.348	.368	.410	.299	.324	.302	.323	.279	.314
Rib roast	do	.267	.297	.302	.335	.270	.287	.268	.285	.246	.273
Chuck roast	do	.223	.250	.263	.292	.223	.250	.208	.226	.210	.229
Plate beef	do	.178	.208	.175	.190	.162	.185	.190	.201	.183	.201
Pork chops	do	.325	.345	.329	.351	.356	.374	.362	.383	.322	.347
Bacon, sliced	do	.530	.540	.506	.512	.568	.571	.506	.521	.451	.461
Ham, sliced	do	.445	.455	.501	.501	.494	.477	.460	.470	.438	.456
Lard	do	.323	.322	.331	.327	.338	.343	.340	.337	.310	.309
Lamb	do	.350	.350	.312	.353	.330	.364	.373	.387	.290	.370
Salmon, canned	do	.275	.285	.366	.368	.383	.373	.280	.280	.259	.263
Eggs, strictly fresh	Dozen	.396	.402	.542	.508	.500	.475	.438	.470	.384	.368
Butter	Pound	.588	.545	.530	.484	.588	.544	.580	.534	.545	.489
Cheese	do	.353	.348	.344	.340	.350	.354	.353	.341	.376	.353
Milk	Quart	.152	.155	.140	.140	.150	.150	.160	.185	.130	.130
Bread	16 ounces[1]	.089	.089	.089	.090	.106	.106	.094	.093	.082	.086
Flour	Pound	.067	.068	.070	.070	.067	.068	.074	.074	.070	.069
Corn meal	do	.056	.058	.082	.086	.074	.078	.065	.064	.064	.064
Rice	do	.118	.120	.125	.128	.125	.129	.087	.093	.117	.117
Potatoes	do	.030	.027	.029	.025	.018	.015	.036	.021	.029	.022
Onions	do	.040	.032	.046	.037	.037	.037	.051	.044	.048	.028
Beans, navy	do	.185	.185	.185	.179	.179	.176	.194	.193	.164	.164
Prunes	do	.161	.160	.169	.170	.158	.164	.165	.163	.153	.156
Raisins	do	.157	.153	.158	.158	.146	.149	.150	.150	.158	.143
Sugar	do	.091	.092	.097	.095	.100	.100	.090	.090	.093	.090
Coffee	do	.323	.323	.319	.320	.427	.421	.281	.274	.264	.273
Tea	do	.796	.786	.618	.629	.778	.775	.645	.640	.694	.694

Article.	Unit.	Columbus, Ohio.		Dallas, Tex.		Fall River, Mass.		Indianapolis, Ind.		Jacksonville, Fla.	
Sirloin steak	do	$0.323	$0.348	$0.340	$0.364	$0.435	$0.483	$0.322	$0.347	$0.338	$0.353
Round steak	do	.300	.326	.334	.349	.372	.387	.313	.343	.313	.342
Rib roast	do	.254	.278	.288	.303	.278	.328	.238	.266	.269	.277
Chuck roast	do	.230	.248	.259	.275	.242	.284	.222	.248	.228	.242
Plate beef	do	.179	.210	.211	.224	.....	.....	.177	.193	.170	.186
Pork chops	do	.313	.330	.341	.334	.337	.345	.336	.348	.344	.354
Bacon, sliced	do	.481	.484	.547	.537	.448	.456	.400	.494	.505	.511
Ham, sliced	do	.455	.453	.483	.492	.436	.436	.453	.465	.438	.438
Lard	do	.329	.324	.345	.332	.320	.317	.315	.318	.329	.331
Lamb	do	.325	.375	.417	.400	.324	.347	.300	.283	.331	.345
Salmon, canned	do	.266	.266	.277	.290	.315	.294	.239	.250	.285	.284
Eggs, strictly fresh	Dozen	.374	.375	.400	.360	.576	.553	.369	.361	.470	.465
Butter	Pound	.544	.488	.531	.509	.542	.498	.542	.488	.594	.559
Cheese	do	.353	.324	.353	.326	.331	.333	.385	.364	.358	.351
Milk	Quart	.130	.123	.163	.167	.130	.130	.107	.107	.180	.175
Bread	16 ounces[1]	.089	.087	.085	.085	.088	.089	.089	.089	.084	.087
Flour	Pound	.066	.067	.065	.065	.074	.074	.066	.068	.070	.070
Corn meal	do	.066	.067	.070	.066	.093	.093	.067	.069	.063	.065
Rice	do	.119	.123	.118	.116	.121	.121	.118	.120	.106	.105
Potatoes	do	.013	.019	.026	.022	.030	.026	.021	.018	.037	.027
Onions	do	.045	.040	.047	.031	.044	.035	.047	.034	.054	.051
Beans, navy	do	.181	.176	.182	.184	.186	.182	.180	.183	.196	.197
Prunes	do	.154	.158	.170	.183	.168	.167	.165	.168	.177	.174
Raisins	do	.151	.151	.156	.154	.159	.157	.173	.174	.181	.172
Sugar	do	.090	.089	.094	.094	.099	.087	.092	.091	.092	.090
Coffee	do	.288	.288	.355	.363	.334	.320	.295	.293	.319	.317
Tea	do	.800	.810	.823	.873	.506	.517	.765	.767	.724	.734

[1] Loaf; 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON MAR. 15, 1918, AND APR. 15, 1918, IN 30 CITIES—Continued.

Article.	Unit.	Kansas City, Mo.		Little Rock, Ark.		Los Angeles, Cal.		Louisville, Ky.		Manchester, N. H.	
		Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.
Sirloin steak	Pound	$0.329	$0.360	$0.340	$0.350	$0.310	$0.315	$0.315	$0.342	$0.441	$0.473
Round steak	do	.302	.335	.293	.314	.278	.288	.295	.329	.400	.431
Rib roast	do	.243	.280	.260	.288	.262	.276	.241	.268	.270	.294
Chuck roast	do	.211	.241	.221	.245	.223	.225	.221	.238	.242	.261
Plate beef	do	.168	.197	.193	.222	.185	.187	.204	.219	.....	.....
Pork chops	do	.311	.329	.337	.338	.388	.396	.324	.353	.324	.340
Bacon, sliced	do	.495	.503	.529	.531	.564	.583	.494	.515	.459	.468
Ham, sliced	do	.460	.481	.481	.496	.529	.539	.461	.466	.418	.423
Lard	do	.344	.348	.340	.331	.337	.338	.325	.322	.345	.344
Lamb	do	.255	.303	.345	.378	.320	.328	.333	.388	.325	.350
Salmon, canned	do	.300	.300	.289	.288	.329	.319	.246	.249	.307	.304
Eggs, strictly fresh	Dozen	.397	.386	.393	.383	.430	.426	.389	.360	.539	.513
Butter	Pound	.534	.482	.585	.539	.538	.441	.575	.521	.583	.535
Cheese	do	.363	.356	.374	.358	.337	.335	.370	.356	.339	.338
Milk	Quart	.122	.122	.150	.150	.140	.140	.128	.128	.140	.140
Bread	16 ounces[1]	.088	.089	.093	.093	.076	.078	.084	.088	.077	.076
Flour	Pound	.067	.067	.067	.067	.063	.063	.068	.067	.069	.070
Corn meal	do	.074	.070	.066	.066	.083	.083	.065	.065	.077	.078
Rice	do	.119	.123	.115	.113	.119	.121	.120	.119	.121	.120
Potatoes	do	.025	.019	.027	.023	.019	.017	.028	.019	.027	.025
Onions	do	.049	.034	.048	.038	.026	.022	.041	.027	.043	.028
Beans, navy	do	.182	.183	.185	.185	.168	.171	.181	.174	.186	.187
Prunes	do	.144	.147	.169	.167	.156	.163	.175	.164	.163	.171
Raisins	do	.146	.152	.153	.151	.138	.138	.159	.153	.153	.152
Sugar	do	.100	.099	.097	.095	.088	.086	.090	.090	.098	.096
Coffee	do	.286	.293	.317	.322	.303	.303	.268	.269	.342	.342
Tea	do	.658	.656	.760	.793	.605	.603	.718	.693	.586	.595

Article.	Unit.	Memphis, Tenn.		Mobile, Ala.		Minneapolis, Minn		Newark, N. J.		New Haven, Conn	
Sirloin steak	do	$0.318	$0.361	.....	$0.324	$0.277	$0.311	$0.365	$0.415	$0.409	$0.448
Round steak	do	.308	.341	.....	.316	.261	.299	.373	.423	.376	.415
Rib roast	do	.264	.291	.....	.294	.226	.261	.298	.344	.312	.341
Chuck roast	do	.233	.249	.....	.247	.205	.232	.265	.305	.268	.298
Plate beef	do	.199	.210	.....	.216	.155	.176	.195	.221	.....	.....
Pork chops	do	.321	.340	.....	.371	.304	.315	.362	.379	.327	.346
Bacon, sliced	do	.500	.509	.....	.498	.488	.493	.450	.462	.502	.511
Ham, sliced	do	.437	.444	.....	.426	.440	.446	[2].342	[2].348	.501	.516
Lard	do	.327	.324	.....	.328	.326	.321	.342	.342	.338	.338
Lamb	do	.330	.355	.....	.359	.279	.318	.349	.378	.327	.365
Salmon, canned	do	.301	.294	.....	.271	.342	.343	.353	.344	.336	.342
Eggs, strictly fresh	Dozen	.384	.388	.....	.423	.384	.371	.513	.474	.565	.530
Butter	Pound	.559	.520	.....	.560	.489	.454	.552	.517	.498	.507
Cheese	do	.340	.321	.....	.338	.327	.305	.358	.353	.348	.347
Milk	Quart	.150	.150	.....	.150	.110	.100	.145	.145	.143	.143
Bread	16 ounces[1]	.088	.088	.....	.086	.079	.079	.076	.082	.089	.090
Flour	Pound	.068	.067	.....	.070	.060	.063	.072	.073	.071	.071
Corn meal	do	.062	.062	.....	.069	.059	.057	.085	.085	.085	.083
Rice	do	.107	.110	.....	.111	.116	.121	.121	.122	.123	.124
Potatoes	do	.026	.020	.....	.029	.018	.015	.034	.030	.034	.027
Onions	do	.041	.039	.....	.043	.031	.022	.049	.042	.049	.043
Beans, navy	do	.188	.189	.....	.187	.179	.178	.185	.181	.191	.191
Prunes	do	.162	.161	.....	.161	.155	.152	.178	.178	.179	.181
Raisins	do	.147	.162	.....	.171	.144	.143	.151	.151	.153	.154
Sugar	do	.092	.091	.....	.089	.093	.094	.093	.090	.101	.099
Coffee	do	.294	.298	.....	.266	.309	.309	.299	.299	.322	.331
Tea	do	.734	.791	.....	.625	.504	.510	.563	.563	.600	.614

[1] Loaf; 16 ounces, weight of dough.

[2] Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD ON MAR. 15, 1918, AND APR. 15, 1918, IN 30 CITIES—Concluded.

Article.	Unit.	Norfolk, Va.		Omaha, Nebr.		Portland, Oreg.		Providence, R. I.		Richmond, Va.	
		Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.	Mar. 15, 1918.	Apr. 15, 1918.
Sirloin steak	Pound	.....	$0.401	$0.312	$0.351	$0.281	$0.314	$0.519	$0.564	$0.336	$0.373
Round steak	do	.....	.368	.296	.333	.265	.300	.426	.459	.317	.353
Rib roast	do	.....	.319	.241	.260	.255	.282	.334	.359	.269	.304
Chuck roast	do	.....	.279	.217	.242	.208	.235	.301	.326	.245	.263
Plate beef	do	.....	.208	.164	.178	.171	.194	.....	.....	.202	.217
Pork chops	do	.....	.356	.297	.323	.355	.357	.359	.376	.359	.371
Bacon, sliced	do	.....	.476	.490	.503	.529	.532	.476	.480	.470	.466
Ham, sliced	do	.....	.391	.455	.465	.464	.473	.523	.529	.430	.430
Lard	do	.....	.345	.338	.342	.346	.349	.341	.341	.332	.342
Lamb	do	.....	.395	.275	.333	.294	.324	.332	.369	.338	.394
Salmon, canned	do	.....	.270	.288	.284	.338	.350	.309	.334	.244	.237
Eggs, strictly fresh	Dozen	.....	.441	.386	.366	.421	.404	.567	.525	.392	.427
Butter	Pound	.....	.559	.504	.479	.594	.499	.576	.528	.596	.561
Cheese	do	.....	.355	.353	.341	.336	.341	.340	.339	.360	.357
Milk	Quart	.....	.180	.123	.125	.126	.127	.145	.145	.147	.147
Bread	16 ounces[1]	.....	.085	.088	.089	.087	.087	.088	.091	.089	.089
Flour	Pound	.....	.072	.060	.062	.056	.058	.069	.070	.069	.067
Corn meal	do	.....	.065	.063	.063	.074	.078	.076	.076	.063	.062
Rice	do	.....	.129	.114	.115	.124	.125	.121	.122	.128	.132
Potatoes	do	.....	.028	.023	.019	.014	.012	.026	.025	.030	.026
Onions	do	.....	.039	.043	.030	.029	.025	.034	.031	.047	.042
Beans, navy	do	.....	.189	.172	.169	.149	.153	.187	.185	.198	.196
Prunes	do	.....	.179	.164	.166	.133	.133	.179	.181	.161	.163
Raisins	do	.....	.154	.168	.158	.137	.136	.149	.146	.149	.148
Sugar	do	.....	.091	.090	.090	.089	.090	.096	.096	.095	.093
Coffee	do	.....	.307	.315	.312	.331	.320	.339	.339	.289	.279
Tea	do	.....	.755	.642	.638	.569	.580	.586	.589	.724	.746

Article.	Unit.	Rochester, N. Y.		St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
Sirloin steak	do	$0.323	$0.348	$0.298	$0.335	$0.283	$0.305	$0.357	$0.385	$0.335	$0.375
Round steak	do	.303	.329	.267	.314	.268	.291	.326	.364	.327	.375
Rib roast	do	.259	.289	.250	.288	.238	.255	.285	.321	.265	.289
Chuck roast	do	.243	.271	.216	.245	.215	.230	.247	.279	.238	.273
Plate beef	do	.184	.199	.158	.179	.173	.192	.184	.194	.195	.222
Pork chops	do	.346	.351	.304	.316	.352	.363	.347	.359	.319	.336
Bacon, sliced	do	.447	.443	.482	.483	.508	.517	.495	.501	.492	.496
Ham, sliced	do	.430	.445	.456	.469	.446	.463	.450	.473	.455	.465
Lard	do	.336	.328	.320	.324	.359	.358	.324	.325	.338	.335
Lamb	do	.318	.362	.277	.329	.293	.338	.334	.374	.333	.360
Salmon, canned	do	.298	.296	.298	.290	.321	.324	.299	.294	.270	.275
Eggs, strictly fresh	Dozen	.474	.443	.380	.366	.394	.408	.466	.440	.390	.375
Butter	Pound	.552	.507	.493	.451	.546	.491	.539	.506	.545	.508
Cheese	do	.342	.338	.334	.319	.337	.335	.329	.325	.386	.376
Milk	Quart	.136	.125	.110	.100	.114	.114	.140	.126	.111	.111
Bread	16 ounces[1]	.080	.083	.079	.074	.088	.089	.085	.086	.090	.090
Flour	Pound	.067	.067	.062	.061	.055	.055	.071	.070	.063	.064
Corn meal	do	.079	.076	.067	.065	.075	.076	.....	.....	.083	.084
Rice	do	.128	.128	.128	.128	.108	.115	.124	.125	.130	.128
Potatoes	do	.019	.019	.020	.015	.014	.012	.025	.022	.021	.018
Onions	do	.028	.023	.030	.024	.042	.029	.052	.042	.029	.022
Beans, navy	do	.193	.178	.187	.183	.179	.173	.181	.178	.195	.196
Prunes	do	.187	.184	.165	.165	.150	.150	.171	.172	.169	.168
Raisins	do	.151	.151	.151	.145	.145	.142	.147	.144	.178	.173
Sugar	do	.091	.090	.095	.096	.097	.097	.092	.090	.093	.094
Coffee	do	.303	.295	.323	.316	.350	.354	.318	.323	.296	.300
Tea	do	.533	.533	.550	.553	.627	.622	.586	.608	.696	.708

[1] Loaf; 16 ounces, weight of dough.

PRICES OF GAS FOR HOUSEHOLD USE IN THE UNITED STATES.

Prices of gas for household use on April 15 of each year, 1913 to 1918, inclusive, are given in the table following.

The prices given are per 1,000 cubic feet, and are the net rates charged for gas for household use as distinguished from use by manufacturing plants and industrial establishments. Where a sliding scale of prices, based on amount consumed, was reported, the price for the smallest quantity has been quoted. Prices are in most cases for manufactured gas, but natural gas has also been quoted where that is in general use.

Prices are shown for manufactured gas in 39 cities. Fifteen companies, representing 13 cities, show an increase in price on April 15, 1918, as compared with April 15, 1917. Thirty-five companies, representing 26 cities, show no change in price. Two companies show a decline in the price per 1,000 cubic feet. In Portland, Oreg., the price of gas decreased $0.056; in Scranton, the price decreased $0.05. In Chicago, the rate was changed from 80 cents per 1,000 cubic feet to 30 cents for the first 350 cubic feet plus 70 cents per 1,000 for the next 9,650 cubic feet.

Prices for natural gas in 10 cities are also given. Cincinnati shows an increase of $0.05, while the price in Kansas City is just double in April, 1918, what it was in April, 1917.

Prices for manufactured and natural gas, mixed, are given for Los Angeles, Cal., on April of each year, 1915 to 1918, inclusive. No change in price is shown.

NET PRICE PER 1,000 CUBIC FEET OF GAS FOR HOUSEHOLD USE ON APR. 15 OF EACH YEAR, 1913 TO 1918, BY CITIES AND COMPANIES.

Manufactured gas.

City and company.	Apr. 15, 1913.	Apr. 15, 1914.	Apr. 15, 1915.	Apr. 15, 1916.	Apr. 15, 1917.	Apr. 15, 1918.
Atlanta, Ga.	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
Baltimore, Md.	.90	.80	.80	.75	.75	.75
Birmingham, Ala.	1.00	.95	.95	.95	.95	.95
Boston, Mass.:						
Company A	.80	.80	.80	.80	.80	.90
Company B	.....	.....	.80	.80	.80	.85
Company C	.85	.85	.80	.80	.80	.80
Bridgeport, Conn.	.....	.....	.....	1.00	1.00	1.00
Buffalo, N. Y.	1.00	1.00	1.00	1.00	1.00	1.00
Butte, Mont.	.....	.....	1.50	1.50	1.485	1.485
Charleston, S. C.	1.10	1.10	1.10	1.10	1.00	1.10
Chicago, Ill.	.80	.80	.80	.80	.80	[1] 1.00
Cleveland, Ohio	.80	.80	.80	.80	.80	.80
Denver, Colo.	.85	.80	.80	.80	.80	.85
Detroit, Mich., Company B	.75	.75	.75	.75	.75	.75
Fall River, Mass.	.80	.80	.80	.80	.80	.95
Indianapolis, Ind., Company B	.60	.55	.55	.55	.55	.55
Jacksonville, Fla.	1.20	1.20	1.15	1.15	1.15	1.25
Los Angeles, Cal.:						
Company A	.75	.70	.....	.....	.....	.....
Company B	.75	.70	.....	.....	.....	.....
Company C	.75	.70	.....	.....	.....	.....
Manchester, N. H.	1.10	1.10	1.00	1.00	1.00	1.00
Memphis, Tenn.	1.00	1.00	1.00	1.00	1.00	1.00

NET PRICE PER 1,000 CUBIC FEET OF GAS FOR HOUSEHOLD USE ON APR. 15 OF EACH YEAR, 1913 TO 1918, BY CITIES AND COMPANIES—Concluded.

Manufactured gas—Concluded.

City and company.	Apr. 15, 1913.	Apr. 15, 1914.	Apr. 15, 1915.	Apr. 15, 1916.	Apr. 15, 1917.	Apr. 15, 1918.
Milwaukee, Wis.	$0.75	$0.75	$0.75	$0.75	$0.75	$0.75
Minneapolis, Minn., Company A	.85	.80	.80	.77	.77	.77
Newark, N. J.	1.00	.90	.90	.90	.90	.97
New Haven, Conn.	.90	.90	.90	.90	.90	1.00
New Orleans, La.	1.10	1.00	1.00	1.00	1.00	1.00
New York, N. Y.:						
Company A	.80	.80	.80	.80	.80	.80
Company B	.80	.80	.80	.80	.80	.80
Company C	.80	1.00	.....	.....	.80	.....
Company D	1.00	.95	.95	.95	.80	.80
Company E	.80	.80	.80	.80	.80	.80
Company F	.80	.80	.80	.80	.80	.80
Company G	.80	.80	.80	.80	.80	.80
Company H	.80	.80	.80	.80	.80	.80
Company I	.80	.80	.80	.80	.80	.80
Company J	.80	.80	.80	.80	.80	.80
Omaha, Nebr.	1.15	1.15	1.15	1.00	1.00	1.15
Philadelphia, Pa., Company B	1.00	1.00	1.00	1.00	1.00	1.00
Pittsburgh, Pa.:						
Company A	1.00	1.00	1.00	1.00	1.00	1.00
Company B	1.00	1.00	1.00	1.00	1.00	1.00
Portland, Oreg.	.95	.95	.886	.95	.886	.83
Providence, R. I.	.85	.85	.85	.85	.85	1.00
Richmond, Va.	.90	.90	.90	.80	.80	.80
Rochester, N. Y.	.....	.....	.....	.....	.95	.95
St. Louis, Mo.	.80	.80	.80	.80	.75	.75
St. Paul, Minn.	.95	.90	.90	.85	.85	.85
Salt Lake City, Utah:						
Illuminating	[1] 1.30	[1] 1.30	[1] 1.30	.....	.....	.....
Cooking and heating	[1] 1.90	[1] 1.90	[1] 1.90	[1] 1.90	[1] 1.90	[1] 1.90
San Francisco, Cal.	.75	.85	.85	.85	.85	.85
Scranton, Pa.:						
Company A	.95	.95	.95	.95	.95	1.15
Company B	1.20	1.20	1.20	1.20	1.20	1.15
Seattle, Wash.	1.00	1.00	1.00	1.00	1.00	1.25
Springfield, Ill.	.....	.....	1.00	1.00	1.00	1.00
Washington, D. C.:						
Company A	1.00	.85	.85	.85	.75	.90
Company B	.85	1.00	1.00	1.00	.85	.90

Natural gas.

Buffalo, N. Y.	$0.30	$0.30	$0.30	$0.30	$0.30	$0.30
Cincinnati, Ohio	.30	.30	.30	.30	.30	.35
Cleveland, Ohio	.30	.30	.30	.30	.30	.30
Columbus, Ohio	.....	.....	.....	.....	.30	.30
Dallas, Tex.	.45	.45	.45	.45	.45	.45
Kansas City, Mo.	.27	.27	.27	.27	.30	.60
Little Rock, Ark.	.40	.40	.40	.40	.40	.40
Los Angeles, Cal., Company B	.....	.....	.....	.645	.645	.645
Louisville, Ky.	.....	.62	.648	.648	.648	.648
Pittsburgh, Pa.:						
Company C	.275	.275	.275	.275	.275	.275
Company D	.30	.30	.30	.30	.30	.30
Company E	.275	.275	.275	.275	.275	.275
Company G	.275	.275	.275	.275	.275	.275
Company H	.275	.275	.275	.275	.275	.275

Manufactured and natural gas mixed.

Los Angeles, Cal.:						
Company A	.....	.....	$0.68	$0.68	$0.68	$0.68
Company C	.....	.....	.68	.68	.68	.68

[1] Rate entered is for first 2,000 cubic feet.

CHANGES IN WHOLESALE PRICES IN THE UNITED STATES.

Information gathered by the Bureau of Labor Statistics in representative markets shows that the wholesale prices of many important commodities averaged higher in the first three months of 1918 than in the preceding quarter. Among the articles showing a decided increase were cotton, wool, oats, rye, barley, sheep, butter, milk, eggs, rye flour, cotton and woolen goods, and pig tin. Slight increases were shown for corn meal, rice, lard, hams, salt pork, mutton, anthracite coal, and crude and refined petroleum. Butter and eggs declined sharply in March from the high level attained in the first two months of the year. Potatoes were higher in January, but fell in March to the lowest point reached since 1915.

Articles that averaged less in price in the first quarter of 1918 than in the preceding quarter were cattle, hogs, hides, corn, fresh beef, bacon, wheat flour, sugar, and leather. Wheat, copper, pig iron, steel billets, tin plate, coke, and bituminous coal showed no change as compared with the last quarter of 1917.

A comparison of wholesale prices of important commodities since July, 1914, the month preceding the outbreak of war in Europe, is contained in the table which follows. The actual money prices for the specified months are shown in the first part. The relative prices in the second part are based on the actual prices, the prices for July, 1914, being taken as 100.

WHOLESALE PRICES IN JULY, 1914, 1915, AND 1916, AND IN CERTAIN MONTHS OF 1917 AND 1918.

ACTUAL MONEY PRICES.

Article.	Unit.	July—			1917				1918		
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS.											
(a) Animal.											
Cattle, good to choice steers	100 lbs.	$ 9.219	$ 9.213	$ 9.985	$ 10.530	$ 12.310	$ 12.560	$ 14.675	$ 13.113	$ 13.075	$ 13.231
Beef, fresh, good native steers	Lb.	.135	.132	.141	.138	.160	.164	.190	.175	.175	.175
Beef, salt, extra mess	Bbl.	17.250	17.500	18.250	23.250	26.250	30.500	30.700	31.500	31.500	31.500
Hogs, heavy	100 lbs.	8.769	7.281	9.825	10.955	15.795	15.460	17.590	16.300	16.719	16.831
Bacon, short clear sides	Lb.	.141	.111	.157	.165	.218	.248	.321	.293	.284	.279
Hams, smoked, loose	Lb.	.177	.161	.190	.195	.245	.240	.286	.295	.298	.303
Lard, prime, contract	Lb.	.102	.081	.131	.161	.213	.201	.247	.250	.268	.266
Pork, salt, mess	Bbl.	23.625	18.500	27.167	32.250	39.000	42.250	48.300	50.400	51.583	52.875
Sheep, ewes	100 lbs.	4.538	5.469	6.545	9.260	11.715	8.600	10.525	11.144	11.419	12.880
Mutton, dressed	Lb.	.095	.109	.131	.137	.165	.145	.191	.192	.189	.195
Butter, creamery, extra	Lb.	.270	.261	.276	.380	.428	.376	.431	.487	.489	.413
Eggs, fresh, firsts	Doz.	.187	.169	.223	.411	.319	.318	.372	.567	.508	.347
Milk	Qt.	.030	.030	.031	.051	.049	.050	.072	.081	.077	.075
(b) Vegetable.											
Wheat, No. 1 northern	Bu.	.897	1.390	1.170	1.917	2.381	2.582	2.170	2.170	2.170	2.170
Wheat flour, standard patent	Bbl.	4.591	7.031	6.100	9.215	11.619	12.750	10.500[1]	10.085	10.390[1]	10.094

[1] Standard war flour.

WHOLESALE PRICES IN JULY, 1914, 1915, AND 1916, AND IN CERTAIN MONTHS OF 1917 AND 1918—Continued.

ACTUAL MONEY PRICES—Concluded.

Article.	Unit.	July—			1917				1918		
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS—contd.											
(b) *Vegetable*—Contd.											
		$	$	$	$	$	$	$	$	$	$
Corn, No. 2, mixed	Bu.	0.710	0.783	0.808	0.982	1.397	2.044	1.968	1.775	1.750	1.730
Corn meal	100 lbs.	1.613	(2)	1.946	2.467	3.643	4.880	5.238	5.080	5.330	5.500
Oats, standard, in store	Bu.	.369	.529	.405	.557	.652	.764	.591	.830	.863	.925
Rye, No. 2	Bu.	.618	1.036	.966	1.448	1.854	2.226	1.811	1.915	2.269	2.869
Rye flour, pure, medium straight	Bbl.	2.975	5.388	5.150	7.380	9.400	11.620	9.625	9.725	11.138	13.113
Barley, fair to good malting	Bu.	.533	.743	.746	1.180	1.335	1.391	1.306	1.534	1.849	2.030
Rice, Honduras, head	Lb.	.054	.049	.046	.048	.049	.071	.077	.088	.081	.085
Potatoes, white	Bu.	1.206	.444	.863	1.795	2.669	2.375	1.188	1.272	1.136	.690
Sugar, granulated	Lb.	.042	.058	.075	.066	.082	.075	.082	.074	.073	.073
TEXTILES AND LEATHER GOODS.											
Cotton, upland, middling	Lb.	.131	.092	.130	.176	.203	.261	.281	.324	.319	.339
Cotton yarn, carded, 10/1	Lb.	.215	.160	.253	.340	.360	.450	.420	.536	.554	.575
Sheeting, brown, Pepperell	Yd.	.070	.060	.078	.110	.120	.140	.145	.171	.186	.208
Bleached muslin, Lonsdale	Yd.	.085	.075	.088	.110	.113	.160	.170	.180	.189	.227
Wool, 1/4 and 3/8 grades, scoured	Lb.	.444	.557	.686	.873	1.000	1.200	1.382	1.455	1.455	1.455
Worsted yarn, 2/32's	Lb.	.650	.850	1.100	1.250	1.300	1.600	1.800	2.000	2.007	2.100
Clay worsted suitings, 16-oz	Yd.	1.328	1.508	2.000	2.125	2.675	3.250	3.650	4.065	4.150	4.150
Storm serge, all-wool, 50-in	Yd.	.505	.539	.760	.907	.907	1.176	1.250	1.308	1.308	1.308
Hides, packers', heavy native steers	Lb.	.194	.258	.270	.335	.305	.330	.338	.328	.293	.263
Leather, chrome calf	Sq. ft.	.275	.280	.460	.705	.595	.540	.540	.530	.530	.530
Leather, sole, oak	Lb.	.475	.495	.635	.835	.835	.815	.830	.830	.830	.800
Shoes, men's, Goodyear welt, vici calf, blucher	Pair.	3.150	3.250	3.750	4.750	4.750	4.750	4.750	4.750	4.750	5.000
Shoes, women's, Goodyear welt, gun metal, button	Pair.	2.260	2.350	2.750	3.500	3.500	3.500	3.500	3.500	3.500	3.500
MINERAL AND METAL PRODUCTS.											
Coal, anthracite, chestnut	2,240 lbs.	5.211	5.200	5.507	5.739	5.236	5.933	6.232	6.600	6.600	6.594
Coal, bituminous, run of mine	2,000 lbs.	2.200	2.200	2.200	4.500	5.000	5.000	3.300	3.750	3.750	3.750
Coke, furnace, prompt shipment	2,000 lbs.	2.000	1.750	2.750	9.500	7.500	15.000	6.000	6.000	6.000	6.000
Copper, electrolytic	Lb.	.134	.199	.265	.295	.340	.318	.235	.235	.235	.235
Copper wire, bare, No. 8	Lb.	.148	.210	.325	.368	.368	.338	.298	.263	.263	.263
Pig iron, Bessemer	2,240 lb.	14.900	14.950	21.950	35.950	42.200	57.450	37.250	37.250	37.250	37.250
Steel billets	2,240 lb.	19.000	21.380	41.000	63.000	73.750	100.000	49.375	47.500	47.500	47.500
Tin plate, domestic coke	100 lbs.	3.350	3.175	5.875	7.000	8.000	12.000	(1)	7.750	7.750	7.750
Pig tin	Lb.	.311	.391	.389	.430	.543	.620	.605	.842	.850	.850
Pig lead	Lb.	.039	.058	.069	.075	.094	.114	.080	.068	.071	.072
Spelter	Lb.	.051	.220	.113	.098	.108	.093	.084	.079	.080	.075
Petroleum, crude	Bbl.	1.750	1.350	2.600	2.850	3.050	3.400	3.500	3.750	3.938	4.000
Petroleum, refined, water-white	Gal.	.120	.120	.120	.120	.120	.120	.130	.160	.160	.160
Gasoline, motor	Gal.	.140	.120	.240	.220	.240	.240	.240	.240	.240	.240

[1] No quotation.

WHOLESALE PRICES IN JULY, 1914, 1915, AND 1916, AND IN CERTAIN MONTHS OF 1917 AND 1918—Concluded.

RELATIVE PRICES.

Article.	July—			1917				1918		
	1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS.										
(a) Animal.										
Cattle, good to choice steers	100.0	99.9	108.3	114.2	133.5	136.2	159.2	142.2	141.8	143.5
Beef, fresh, good native steers	100.0	97.8	104.4	102.2	118.5	121.5	140.7	129.6	129.6	129.6
Beef, salt, extra mess	100.0	101.4	105.8	134.8	152.2	176.8	178.0	182.6	182.6	182.6
Hogs, heavy	100.0	83.0	112.0	124.9	180.1	176.3	200.6	185.9	190.7	191.9
Bacon, short clear sides	100.0	78.7	111.3	117.0	154.6	175.9	227.7	207.8	201.4	197.9
Hams, smoked, loose	100.0	91.0	107.3	110.2	138.4	135.6	161.6	166.7	168.4	171.2
Lard, prime, contract	100.0	79.4	128.4	157.8	208.8	197.1	242.2	245.1	262.7	260.8
Pork, salt, mess	100.0	78.3	115.0	136.5	165.1	178.8	204.4	213.3	218.3	223.8
Sheep, ewes	100.0	120.5	144.2	204.1	258.2	189.5	231.9	245.6	251.6	282.1
Mutton, dressed	100.0	114.7	137.9	144.2	173.7	152.6	201.1	202.1	198.9	205.3
Butter, creamery, extra	100.0	96.7	102.2	140.7	158.5	139.3	159.6	180.4	181.1	164.1
Eggs, fresh, firsts	100.0	90.4	119.3	219.8	170.6	170.1	198.9	297.9	271.7	185.6
Milk	100.0	100.0	103.3	170.0	163.3	166.7	240.0	270.0	256.7	250.0
(b) Vegetable.										
Wheat, No. 1 northern	100.0	155.0	130.4	213.7	265.4	287.8	241.9	241.9	241.9	241.9
Wheat flour, standard patent	100.0	153.0	132.8	200.6	252.9	277.5	228.6	[1] 219.5	[1] 224.2	[1] 219.7
Corn, No. 2 mixed	100.0	110.3	113.8	138.3	196.8	287.9	277.2	250.0	246.5	243.7
Corn meal	100.0	(2)	120.6	152.9	225.9	302.5	324.7	314.9	339.4	341.0
Oats, standard, in store	100.0	143.4	109.8	150.9	176.7	207.0	160.2	224.9	233.9	250.7
Rye, No. 2	100.0	167.6	156.3	234.3	300.0	360.2	293.0	309.9	367.2	464.2
Rye flour, pure, medium straight	100.0	181.1	173.1	248.1	316.0	390.6	323.5	325.9	374.4	440.8
Barley, fair to good malting	100.0	139.4	140.0	221.4	250.5	251.0	245.0	287.8	346.9	380.9
Rice, Honduras, head	100.0	90.7	85.2	88.9	90.7	131.5	142.6	163.0	150.0	157.4
Potatoes, white	100.0	36.8	71.6	148.8	221.3	196.9	98.5	105.5	94.2	57.2
Sugar, granulated	100.0	138.1	178.6	157.1	195.2	178.6	195.2	176.2	173.9	173.9
TEXTILES AND LEATHER GOODS.										
Cotton, upland, middling	100.0	70.2	99.2	134.4	155.0	199.2	214.5	247.3	243.5	258.8
Cotton yarn, carded, 10/1	100.0	74.4	117.7	158.1	167.4	209.3	195.3	249.3	257.7	267.4
Sheeting, brown, Pepperell	100.0	85.7	111.4	157.1	171.4	200.0	207.1	244.3	265.7	237.1
Bleached muslin, Lonsdale	100.0	88.2	103.5	129.4	132.9	188.2	200.0	211.8	222.4	267.1
Wool, 1/4 and 3/8 grades, scoured	100.0	125.5	154.5	196.6	225.2	270.3	311.3	327.7	327.7	327.7
Worsted yarn, 2/32's	100.0	130.8	169.2	192.3	200.0	246.2	276.9	307.7	308.8	323.1
Clay worsted suitings, 16-oz.	100.0	113.6	159.6	160.0	201.4	244.7	274.8	306.1	312.5	312.5
Storm serge, all wool, 50-in.	100.0	106.7	150.5	179.6	179.6	232.9	247.5	259.0	259.0	259.0
Hides, packers', heavy native steers	100.0	133.0	139.2	172.7	157.2	170.1	174.2	169.1	151.0	135.6
Leather, chrome calf	100.0	101.8	167.3	255.4	216.4	196.4	196.4	192.7	192.7	192.7
Leather, sole, oak	100.0	104.2	133.7	175.8	175.8	171.6	174.7	174.7	174.7	168.4
Shoes, men's, Goodyear welt, vici calf, blucher	100.0	103.2	119.0	150.8	150.8	150.8	150.8	150.8	150.8	158.7
Shoes, women's, Goodyear welt, gun metal, button	100.0	104.0	121.7	154.9	154.9	154.9	154.9	154.9	154.9	154.9
MINERAL AND METAL PRODUCTS.										
Coal, anthracite, chestnut	100.0	99.2	105.1	100.5	99.9	113.2	118.9	125.9	125.9	125.2
Coal, bituminous, run of mine	100.0	100.0	100.0	204.5	227.3	227.3	150.0	170.5	170.5	170.5
Coke, furnace, prompt shipment	100.0	87.5	137.5	475.0	375.0	750.0	300.0	300.0	300.0	300.0
Copper, electrolytic	100.0	148.5	197.8	220.1	253.7	237.3	175.4	175.4	175.4	175.4
Copper wire, bare, No. 8	100.0	141.9	219.6	248.6	248.6	228.4	201.4	177.7	177.7	177.7
Pig iron, Bessemer	100.0	100.3	147.3	241.3	283.2	385.6	250.0	250.0	250.0	250.0
Steel billets	100.0	112.5	215.8	331.6	388.2	526.3	259.9	250.0	250.0	250.0
Tin plate, domestic, coke	100.0	91.8	175.4	209.0	238.8	358.2	(2)	231.3	231.3	231.3
Pig tin	100.0	125.7	125.1	138.3	174.6	199.4	194.5	270.7	273.3	273.3
Pig lead	100.0	148.7	176.9	192.3	241.0	292.3	205.1	174.4	182.1	184.6
Spelter	100.0	431.4	221.6	192.2	211.8	182.4	164.7	154.9	156.9	147.1
Petroleum, crude	100.0	77.1	148.6	162.9	174.3	177.1	200.0	214.3	225.0	228.6
Petroleum, refined, water-white	100.0	100.0	100.0	100.0	100.0	100.0	108.3	133.3	133.3	133.3
Gasoline, motor	100.0	85.7	171.4	157.1	171.4	171.4	171.4	171.4	171.4	171.4

[1] Standard war flour. [2] No quotation.

INDEX NUMBERS OF WHOLESALE PRICES, 1913 TO MARCH, 1918.

The great increase that has taken place in the wholesale prices of important commodities in the United States since the outbreak of war in Europe is also shown by the index numbers in the subjoined table. This increase, it will be seen, has been particularly great among farm products, foods, clothing, metal products, and chemicals and drugs.

During 1914, the prices of most commodities increased between January and September, but declined rapidly in the closing months of the year, due to the prevailing business stagnation brought about by the War. In 1915 a reaction occurred and prices again advanced, reaching high levels late in the year. Since January, 1916, the rise in wholesale prices has been unprecedented for many commodities of importance, although fuel and metal products showed a sharp decline in the last half of 1917.

During the first three months of 1918 prices as a whole continued to advance, the bureau's weighted index number for March standing at 187, as compared with 160 for March, 1917, and 100 as the average for the 12 months of 1913. In the period from March, 1917, to March, 1918, the index number of farm products increased from 162 to 211, that of food articles from 161 to 178, and that of cloths and clothing from 163 to 220. In the three months January to March, 1918, the index number of food articles decreased from 188 to 178, due principally to the considerable drop in the prices of butter, eggs, and vegetables.

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES, 1913 TO MARCH, 1918.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1913										
Average for year	100	100	100	100	100	100	100	100	100	100
January	97	99	100	99	107	100	101	100	100	99
April	97	96	100	99	102	101	100	100	99	98
July	101	101	100	100	98	101	99	100	102	101
October	103	102	100	100	99	98	100	100	100	101
1914										
Average for year	103	103	98	92	87	97	103	103	97	99
January	101	102	99	99	92	98	101	103	98	100
April	103	95	100	98	91	99	101	103	99	98
July	104	103	100	90	85	97	101	103	97	99
August	109	112	100	89	85	97	100	103	97	102
September	108	116	99	87	86	96	106	103	98	103
October	103	107	98	87	83	96	109	103	95	99
November	101	106	97	87	81	95	108	103	95	98
December	99	105	97	87	83	94	107	103	96	97

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES, 1913 TO MARCH, 1918—Concluded.

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1915										
Average for year	105	104	100	87	97	94	113	101	98	100
January	102	106	96	86	83	94	106	101	98	98
February	105	108	97	86	87	95	104	101	97	100
March	105	104	97	86	89	94	103	101	97	99
April	107	105	98	84	91	94	102	101	97	99
May	109	105	98	83	96	94	102	101	96	100
June	105	102	98	83	100	93	104	101	96	99
July	108	104	99	84	102	94	107	101	96	101
August	108	103	99	85	100	93	109	101	96	100
September	103	100	100	88	100	93	114	101	96	98
October	105	104	103	90	100	93	121	101	99	101
November	102	108	105	93	104	95	141	101	100	102
December	103	111	107	96	114	97	146	101	103	105
1916										
Average for year	122	127	127	115	148	101	143	110	121	123
January	108	114	110	102	126	99	140	105	107	110
February	109	114	114	102	132	100	144	105	106	111
March	111	115	117	104	141	101	147	105	109	114
April	114	117	119	105	147	102	150	109	111	116
May	116	119	122	104	151	102	153	109	114	118
June	116	119	123	105	149	101	150	109	121	118
July	118	121	126	105	145	98	143	111	122	119
August	126	128	128	107	145	100	132	111	123	123
September	131	134	131	110	148	100	132	111	126	127
October	136	140	137	128	151	101	135	114	132	133
November	145	150	146	150	160	103	142	115	135	143
December	141	146	155	163	185	105	143	115	136	146
1917										
Average for year	188	177	181	169	208	124	185	155	153	175
January	147	150	161	170	183	106	144	128	137	150
February	150	160	162	178	190	108	146	129	138	155
March	162	161	163	181	199	111	151	129	140	160
April	180	182	169	178	208	114	155	151	144	171
May	196	191	173	187	217	117	164	151	147	181
June	196	187	179	193	239	127	165	162	152	184
July	198	180	187	183	257	132	185	165	150	185
August	204	180	193	159	249	133	198	165	155	184
September	203	178	193	155	228	134	203	165	154	182
October	207	183	194	143	182	134	242	165	162	180
November	211	184	202	151	173	135	232	175	164	182
December	204	185	206	153	173	135	230	175	164	181
1918										
January	205	188	209	169	173	136	216	188	177	185
February	207	187	213	171	175	137	217	188	181	187
March[1]	211	178	220	171	175	141	217	188	184	187

[1] March figures are preliminary.

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

A comparison of wholesale and retail price changes for important food articles in recent months is contained in the table which follows. In using these figures it should be understood that the retail prices are not in all cases based on precisely the same articles as are the wholesale prices. For example, fresh beef is not sold by the retailer in the same form in which it leaves the wholesaler. In such cases the articles most nearly comparable were used. It was found impracticable, also, in most instances to obtain both wholesale and retail prices for the same date. The retail prices shown are uniformly those prevailing on the fifteenth of the month, while the wholesale prices are for a variable date, usually several days prior to the fifteenth. For these reasons exact comparison of wholesale with

retail prices can not be made. The figures may be considered indicative, however, of price variations in the retail as compared with the wholesale markets.

In the table which follows, the wholesale price is in each case the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question. The initials W. and R. are used to designate wholesale and retail prices, respectively.

To assist in comparing wholesale with retail price fluctuations, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential represents even approximately the margin of profit received by the retailer since, in addition to possible differences of grade between the articles shown at wholesale and retail, various items of handling cost are included in the figure.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917				1918		
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Mar.	Apr.
Beef, Chicago:												
Steer loin ends.....W..	Lb..	$0.168	$0.175	$0.162	$0.205	$0.200	$0.200	$0.190	$0.235	$0.290	$0.220	$0.230
Sirloin steak.....R..	Lb..	.232	.260	.258	.281	.265	.293	.302	.306	.302	.303	.337
Price differential.....	.....	.064	.085	.098	.076	.065	.093	.112	.071	.102	.083	.107
Beef, Chicago:												
Steer rounds, No. 2..W..	Lb..	.131	.145	.143	.145	.120	.155	.170	.190	.165	.170	.185
Round steak.....R..	Lb..	.202	.233	.228	.241	.227	.256	.266	.273	.273	.274	.304
Price differential.....	.....	.071	.088	.085	.096	.107	.101	.096	.083	.108	.104	.119
Beef, Chicago:												
Steer ribs, No. 2....W..	Lb..	.157	.165	.145	.175	.160	.210	.200	.230	.200	.200	.220
Rib roast.....R..	Lb..	.195	.212	.213	.229	.223	.241	.246	.247	.254	.255	.288
Price differential.....	.....	.038	.047	.068	.054	.063	.031	.046	.017	.054	.055	.068
Beef, New York:												
No. 2, loins.....W..	Lb..	.158	.183	.170	.200	.180	.190	.190	.275	.235	.225	.230
Sirloin steak.....R..	Lb..	.259	.274	.282	.294	.284	.318	.337	.356	.344	.346	.380
Price differential.....	.....	.101	.091	.112	.094	.104	.128	.147	.081	.109	.121	.120
Beef, New York:												
No. 2, rounds.....W..	Lb..	.121	.135	.135	.145	.130	.170	.175	.190	.180	.190	.200
Round steak.....R..	Lb..	.249	.270	.271	.289	.275	.315	.337	.360	.352	.357	.384
Price differential.....	.....	.128	.135	.136	.144	.145	.145	.162	.170	.172	.167	.184
Beef, New York:												
No. 2, ribs.....W..	Lb..	.151	.165	.160	.180	.160	.200	.190	.275	.235	.215	.250
Rib roast.....R..	Lb..	.218	.225	.227	.243	.238	.270	.279	.298	.294	.296	.324
Price differential.....	.....	.067	.060	.067	.063	.078	.070	.089	.023	.059	.081	.074
Pork, Chicago:												
Loins.....W..	Lb..	.149	.165	.150	.165	.165	.240	.250	.330	.270	.270	.290
Chops.....R..	Lb..	.190	.204	.201	.217	.227	.285	.292	.358	.316	.309	.330
Price differential.....	.....	.041	.039	.051	.052	.062	.045	.042	.028	.046	.039	.040
Pork, New York:												
Loins, western.....W..	Lb..	.152	.163	.153	.165	.170	.235	.235	.300	.265	.255	.255
Chops.....R..	Lb..	.217	.230	.217	.239	.248	.319	.326	.399	.348	.349	.367
Price differential.....	.....	.065	.067	.064	.074	.078	.084	.091	.099	.083	.094	.092
Bacon, Chicago:												
Short clear sides...W..	Lb..	.127	.139	.113	.159	.158	.218	.247	.318	.301	.284	.275
Sliced.....R..	Lb..	.294	.318	.315	.328	.316	.395	.439	.475	.498	.492	.519
Price differential.....	.....	.167	.179	.202	.169	.158	.177	.192	.157	.197	.208	.244
Ham, Chicago:												
Smoked.....W..	Lb..	.166	.175	.163	.190	.188	.243	.243	.283	.298	.304	.300
Smoked, sliced.....R..	Lb..	.266	.338	.328	.349	.333	.382	.414	.439	.428	.450	.467
Price differential.....	.....	.100	.163	.165	.159	.145	.139	.171	.156	.130	.146	.167
Lard, New York:												
Prime contracts....W..	Lb..	.110	.104	.080	.133	.159	.215	.201	.246	.246	.262	.263
Pure tub.....R..	Lb..	.160	.156	.151	.168	.213	.268	.274	.313	.330	.334	.334
Price differential.....	.....	.050	.052	.071	.035	.054	.048	.073	.067	.084	.072	.071

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July.			1917				1918		
			1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Mar.	Apr.
Lamb, Chicago:												
Dressed round.....W..	Lb..	$0.140	$0.170	$0.190	$0.190	$0.200	$0.220	$0.260	$0.270	$0.240	$0.240	$0.290
Leg of, yearling....R..	Lb..	.193	.219	.208	.231	.232	.263	.287	.314	.306	.316	.356
Price differential.....	.....	.049	.049	.018	.041	.032	.043	.027	.044	.066	.076	.066
Poultry, New York:												
Dressed fowls.....W..	Lb..	.182	.188	.175	.215	.220	.265	.248	.285	.298	.343	.340
Dressed hens.....R..	Lb..	.214	.220	.219	.256	.261	.293	.287	.323	.326	.....	.....
Price differential.....	.....	.032	.032	.044	.041	.041	.028	.039	.038	.028	.....	.....
Butter, Chicago:												
Creamery, extra...W..	Lb..	.310	.265	.265	.275	.370	.440	.375	.435	.490	.455	.400
Creamery, extra...R..	Lb..	.362	.312	.322	.335	.438	.484	.432	.487	.544	.506	.460
Price differential.....	.....	.052	.047	.057	.060	.068	.044	.057	.052	.054	.051	.060
Butter, New York:												
Creamery, extra....W..	Lb..	.323	.280	.270	.285	.395	.450	.395	.443	.510	.468	.415
Creamery, extra....R..	Lb..	.382	.328	.336	.346	.460	.513	.453	.515	.574	.527	.493
Price differential.....	.....	.059	.048	.066	.061	.065	.063	.058	.072	.064	.059	.078
Butter, San Francisco:												
Creamery, extra....W..	Lb..	.317	.245	.265	.255	.355	.390	.385	.460	.530	.500	.375
Creamery, extra....R..	Lb..	.388	.329	.338	.333	.425	.452	.455	.545	.602	.563	.452
Price differential.....	.....	.071	.084	.073	.078	.070	.062	.070	.085	.072	.063	.077
Cheese, Chicago:												
Whole milk.....W..	Lb..	.142	.133	.145	.145	.218	.223	.216	.246	.233	.248	.215
Full cream.....R..	Lb..	.....	.....	.229	.242	.321	.327	.339	.368	.375	.381	.353
Price differential.....	.....	.....	.....	.084	.097	.103	.104	.123	.122	.142	.133	.138
Cheese, New York:												
Whole milk, State..W..	Lb..	.154	.144	.146	.151	.220	.245	.238	.255	.230	.235	.225
Full cream.....R..	Lb..	.....	.....	.229	.228	.301	.335	.328	.340	.344	.344	.338
Price differential.....	.....	.....	.....	.083	.077	.081	.090	.090	.085	.114	.093	.113
Cheese, San Francisco:												
Fancy.....W..	Lb..	.159	.125	.115	.135	.180	.215	.200	.220	.255	.255	.260
Full cream.....R..	Lb..	.....	.....	.200	.229	.242	.297	.297	.316	.335	.326	.335
Price differential.....	.....	.....	.....	.085	.094	.062	.082	.097	.096	.080	.071	.075
Milk, Chicago:												
Fresh.....W..	Qt..	.038	.036	.037	.036	.045	.054	.047	.074	.070	.062	.058
Fresh, bottled.....R..	Qt..	.080	.080	.080	.081	.100	.100	.100	.129	.119	.119	.119
Price differential.....	.....	.042	.044	.043	.045	.055	.046	.053	.055	.049	.057	.061
Milk, New York:												
Fresh.....W..	Qt..	.035	.030	.030	.031	.051	.049	.050	.072	.081	.075	.059
Fresh, bottled.....R..	Qt..	.090	.090	.090	.090	.100	.109	.114	.138	.150	.146	.140
Price differential.....	.....	.055	.060	.060	.059	.049	.060	.064	.066	.069	.071	.081
Milk, San Francisco:												
Fresh.....W..	Qt..	.039	.039	.038	.038	.038	.038	.043	.059	.066	.066	.059
Fresh, bottled.....R..	Qt..	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121	.121
Price differential.....	.....	.061	.061	.062	.062	.062	.062	.057	.062	.055	.055	.062
Eggs, Chicago:												
Fresh, firsts.....W..	Doz.	.226	.188	.168	.218	.485	.305	.310	.370	.565	.341	.315
Strictly fresh.....R..	Doz.	.292	.261	.248	.296	.525	.376	.406	.469	.651	.407	.380
Price differential.....	.....	.066	.073	.080	.078	.040	.071	.096	.099	.086	.066	.065
Eggs, New York:												
Fresh, firsts.....W..	Doz.	.249	.215	.200	.241	.505	.330	.350	.400	.645	.380	.333
Strictly fresh.....R..	Doz.	.397	.337	.326	.372	.667	.424	.477	.627	.808	.501	.476
Price differential.....	.....	.148	.138	.126	.131	.162	.094	.127	.227	.163	.121	.143
Eggs, San Francisco:												
Fresh.....W..	Doz.	.268	.230	.220	.240	.380	.280	.320	.435	.610	.380	.365
Strictly fresh.....R..	Doz.	.373	.338	.310	.333	.480	.374	.392	.608	.710	.433	.419
Price differential.....	.....	.105	.108	.090	.093	.100	.094	.072	.173	.100	.053	.054
Meal, corn, Chicago:												
Fine.....W..	Lb..	.014	.016	.....	.019	.024	.036	.045	.052	.051	.055	.060
Fine.....R..	Lb..	.029	.028	.031	.031	.042	.050	.058	.071	.070	.071	.072
Price differential.....	.....	.015	.012	.....	.012	.018	.014	.013	.019	.019	.016	.012
Beans, New York:												
Medium, choice....W..	Lb..	.040	.040	.058	.098	.108	.130	.154	.138	.141	.136	.137
Navy, white.....R..	Lb..	.....	.....	.081	.113	.149	.162	.188	.185	.185	.183	.182
Price differential.....	.....	.....	.....	.023	.015	.041	.032	.034	.047	.044	.047	.045
Potatoes, Chicago:												
White[1].....W..	Bu..	.614	1.450	.400	.975	1.750	2.800	2.625	1.135	1.185	.810	.645
White.....R..	Bu..	.900	1.640	.700	1.350	2.370	3.455	2.975	1.660	1.680	1.189	.998
Price differential.....	.....	.286	.190	.300	.381	.620	.655	.350	.525	.495	.379	.353
Rice, New Orleans:												
Head.....W..	Lb..	.050	.054	.049	.046	.048	.049	.071	.077	.088	.085	.088
Head.....R..	Lb..	.....	.....	.075	.074	.074	.088	.101	.100	.106	.110	.107
Price differential.....	.....	.....	.....	.026	.028	.026	.039	.030	.023	.018	.025	.019
Sugar, New York:												
Granulated.....W..	Lb..	.043	.042	.039	.075	.069	.081	.074	.082	.073	.073	.073
Granulated.....R..	Lb..	.049	.046	.043	.079	.074	.087	.084	.097	.097	.088	.088
Price differential.....	.....	.006	.004	.004	.004	.008	.006	.010	.015	.024	.015	.015

[1] Good to choice.

Wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table which follows. A few articles included in the preceding table are omitted from this one, owing to the lack of satisfactory data for 1913. It will be seen from the table that since the beginning of 1918 the retail prices of most of the commodities included in the exhibit have continued to fluctuate at a lower percentage level, as compared with their 1913 base, than have the wholesale prices. This is particularly true of pork, bacon, hams, lard, milk, eggs, and corn meal. For corn meal especially there has been a much smaller percentage of increase in the retail than in the wholesale price.

While the percentage of increase in retail prices was less than that in wholesale prices for most of the articles, it should be noted that a comparison of the actual prices shown in the preceding table indicates that in the majority of cases the margin between the wholesale and the retail price in April, 1918, was considerably greater than in 1913. The following table shows, for example, that the wholesale price of short clear side bacon increased 117 per cent between 1913 and April, 1918, while the retail price of sliced bacon increased only 77 per cent. The preceding table shows, however, that the difference between the wholesale price of the one and the retail price of the other was 16.7 cents per pound in 1913 and 24.4 cents per pound in April, 1918, or 7.7 cents more at the latter date than at the former. It is also seen that the wholesale price in April, 1918, had increased 14.8 cents over the 1913 price, while the retail price had increased 22.5 cents.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100).

[The initial W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917				1918		
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Mar.	Apr.
Beef, Chicago:											
Steer loin ends (hips)....W..	100	104	95	122	119	119	113	140	119	131	137
Sirloin steak.....R..	100	112	111	121	114	126	130	132	130	131	145
Beef, Chicago:											
Steer rounds, No. 2.....W..	100	111	109	111	92	118	130	145	126	130	141
Round steak.....R..	100	115	113	119	112	127	132	135	135	136	151
Beef, Chicago:											
Steer ribs, No. 2.....W..	100	105	92	111	102	134	127	146	127	127	140
Rib roast.....R..	100	109	109	117	114	124	126	127	130	131	148
Beef, New York:											
No. 2 loins, city.....W..	100	116	108	127	114	120	120	174	149	142	165
Sirloin steak.....R..	100	106	109	114	110	123	130	137	133	134	147
Beef, New York:											
No. 2 rounds, city.....W..	100	112	112	120	107	140	145	157	149	157	165
Round steak.....R..	100	108	109	116	110	127	135	145	141	143	154
Beef, New York:											
No. 2 ribs, city.....W..	100	109	106	119	106	132	126	182	156	142	166
Rib roast.....R..	100	103	104	111	109	124	128	137	135	136	149
Pork, Chicago:											
Loins.....W..	100	111	101	111	111	161	168	221	181	168	195
Chops.....R..	100	107	106	114	119	150	154	188	166	163	174

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES (AVERAGE FOR 1913=100)—Concluded.

Article and city.	1913: Average for year.	July			1917				1918.		
		1914	1915	1916	Jan.	Apr.	July.	Oct.	Jan.	Mar.	Apr.
Pork, New York:											
Loins, western.....W..	100	107	101	109	112	155	155	197	174	168	181
Chops.....R..	100	106	100	110	114	147	150	184	160	161	169
Bacon, Chicago:											
Short clear sides.....W..	100	109	89	125	124	172	194	250	237	224	217
Sliced.....R..	100	108	107	112	107	134	149	162	169	167	177
Hams, Chicago:											
Smoked.....W..	100	105	98	114	113	146	146	170	180	183	181
Smoked, sliced.....R..	100	127	123	131	125	144	156	165	161	169	176
Lard, New York:											
Prime, contract.....W..	100	95	73	121	145	195	183	224	224	238	239
Pure, tub.....R..	100	98	94	105	133	164	171	196	206	209	209
Lamb, Chicago:											
Dressed, round.....W..	100	114	128	128	134	148	174	181	161	161	195
Leg of, yearling.....R..	100	111	105	117	117	133	145	159	155	160	180
Poultry, New York:											
Dressed fowls.....W..	100	103	96	118	121	146	136	157	164	188	187
Dressed hens.....R..	100	103	102	120	122	137	134	151	152	.....	.....
Butter, Chicago:											
Creamery, extra.....W..	100	85	85	89	119	142	121	140	158	147	129
Creamery, extra.....R..	100	86	89	93	121	134	119	135	150	140	127
Butter, New York:											
Creamery, extra.....W..	100	87	84	88	122	139	122	137	158	145	128
Creamery, extra.....R..	100	86	88	91	120	134	119	135	150	138	129
Butter, San Francisco:											
Creamery, extra.....W..	100	77	84	80	112	123	121	145	167	158	118
Creamery, extra.....R..	100	85	87	86	110	116	117	140	155	146	116
Milk, Chicago:											
Fresh.....W..	100	95	97	95	118	142	124	195	184	163	153
Fresh, bottled, delivered..R..	100	100	100	101	125	125	125	161	149	149	149
Milk, New York:											
Fresh.....W..	100	86	86	89	146	140	143	206	231	214	169
Fresh, bottled, delivered..R..	100	100	100	100	111	121	127	153	167	162	156
Milk, San Francisco:											
Fresh.....W..	100	100	97	97	97	97	110	151	169	169	151
Fresh, bottled.....R..	100	100	100	100	100	100	100	121	121	121	121
Eggs, Chicago:											
Fresh, firsts.....W..	100	83	74	96	215	135	137	164	250	151	139
Strictly fresh.....R..	100	89	85	101	180	129	139	161	223	139	130
Eggs, New York:											
Fresh, firsts.....W..	100	86	80	97	203	133	141	161	259	153	134
Strictly fresh.....R..	100	89	82	94	168	107	120	158	204	126	120
Eggs, San Francisco:											
Fresh.....W..	100	86	82	90	142	105	119	162	228	142	136
Strictly fresh.....R..	100	91	83	89	129	100	105	163	190	116	112
Meal, corn, Chicago:											
Fine.....W..	100	114	.....	136	171	257	321	371	364	393	429
Fine.....R..	100	97	107	107	145	172	200	245	241	245	248
Potatoes, Chicago:											
White, good to choice....W..	100	236	65	159	285	456	428	185	193	132	105
White.....R..	100	182	78	151	263	384	331	184	187	132	111
Sugar, New York:											
Granulated.....W..	100	98	137	174	153	188	172	191	170	170	170
Granulated.....R..	100	94	129	161	151	178	171	198	198	180	180

WHOLESALE PRICES IN THE UNITED STATES AND FOREIGN COUNTRIES, 1890 TO MARCH, 1918.

In the following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base in order that the trend of prices as shown by these index numbers may be compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913—i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are

therefore to be regarded only as approximations of the correct index numbers in the case of series constructed by averaging the relative prices of individual commodities. This applies to the index numbers of the Annalist, Gibson, the Economist, Sauerbeck, and the Department of Labor of Canada. The index numbers of the Bureau of Labor Statistics, Bradstreet, Dun, and the Bureau of Census and Statistics of Australia are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and can readily be shifted to any desired base.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

[Index numbers expressed as percentages of the index number for 1913.]

Year and month.	United States.					United Kingdom.		Canada.	Australia.
	Bureau of Labor Statistics: 294 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Sauerbeck: 45 commodities.	Department of Labor: 272 commodities (variable).	Bureau of Census and Statistics: 92 commodities.
1890	81	78	.....	[1] 75	75	[1] 83	85	81	97
1895	70	68	70	[1] 67	72	72	73	71	70
1900	80	71	86	77	76	82	88	80	82
1905	86	79	88	83	81	81	85	84	84
1910	100	98	98	93	102	90	92	92	92
1913	100	100	100	100	100	100	100	100	100
1914	99	104	97	101	105	99	100	100	106
1915	100	106	107	105	110	123	127	110	147
1916	123	126	128	123	129	160	160	134	138
1917	175	187	170	169	191	204	205	174	.....
1914									
January	100	102	97	103	100	97	98	101	[2] 100
April	98	101	95	99	99	96	96	101	[2] 102
July	99	104	94	99	101	95	104	99	[2] 109
October	99	107	100	102	108	101	106	102	[2] 113
1915									
January	98	108	99	103	111	112	118	103	[2] 127
April	99	109	106	103	117	124	125	108	[2] 153
July	101	105	107	103	111	122	126	111	[2] 167
October	101	101	108	105	103	125	134	112	[2] 142
1916									
January	110	110	119	114	113	143	149	127	[2] 138
April	116	118	128	121	123	156	157	132	[2] 137
July	119	121	125	120	124	156	157	132	[2] 138
October	133	136	131	126	141	171	175	138	[2] 139
1917									
January	150	151	149	140	150	184	187	154	[2] 149
February	155	159	151	146	156	188	193	166	.....
March	160	170	154	154	166	197	199	172	.....
April	171	188	158	157	188	200	203	169	[2] 145
May	181	203	164	172	204	201	205	177	.....
June	184	198	168	176	197	210	211	179	.....
July	185	189	175	175	200	208	208	179	.....
August	184	190	178	181	203	210	207	184	.....
September	182	195	181	178	206	209	207	179	.....
October	180	200	184	182	207	212	212	179	.....
November	182	199	185	183	206	214	214	183	.....
December	181	200	191	182	209	217	218	187	.....
1918									
January	185	200	195	184	205	215	219	190	.....
February	187	204	196	188	210	216	220	194	.....
March	[3] 187	204	196	189	217	218	221	199	.....

[1] Average for January and July. [2] Quarter beginning in specified month. [3] Preliminary figure.

COST OF LIVING IN THE GULF AND SOUTH ATLANTIC SHIPBUILDING DISTRICTS.

In continuation of the investigation into the cost of living in the various shipbuilding centers of the United States, the Bureau of Labor Statistics, in cooperation with the Shipbuilding Wage Adjustment Board of the Emergency Fleet Corporation, has just completed studies in 13 shipbuilding localities in the Gulf and South Atlantic regions.

The localities covered by this report are Beaumont, Houston, and Orange, Tex.; Slidell and Madisonville, La.; Moss Point and Pascagoula, Miss.; Mobile, Ala.; Jacksonville, Pensacola, and Tampa, Fla.; and Brunswick and Savannah, Ga.

Schedules showing in detail the expenditures for the calendar year 1917 were secured by agents of the Bureau of Labor Statistics through personal visits to the homes of families of workers in shipyards and of other families in the localities in which shipbuilding workers reside.

The following table shows the number of families scheduled in each district, and their average and per cent of total expenditures for each of the principal items of cost of living, together with the per cent of increase in the retail prices of each item in 1915, 1916, and 1917, over the prices in 1914:

AVERAGE EXPENDITURES AND PER CENT OF AVERAGE TOTAL EXPENDITURES OF FAMILIES IN SPECIFIED SHIPBUILDING DISTRICTS IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND THE PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917, OVER THE PRICES IN 1914.

MOBILE, ALA.

Item of expenditure.	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.			Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.		
	Average.	Per cent.	1915	1916	1917	Average.	Per cent.	1915	1916	1917
	100 white families.					33 colored families.				
Clothing:										
Males	$74.81	6.55	1.77	9.12	37.91	$45.59	6.41	1.77	9.12	37.91
Females	65.75	5.83	2.35	8.82	39.72	38.89	5.47	2.35	8.82	39.72
Total	139.56	12.38	2.04	8.98	38.76	84.48	11.88	2.04	8.98	38.74
Furniture and furnishings	36.08	3.20	4.07	15.29	42.76	9.14	1.28	4.07	15.29	42.76
Food	528.58	46.87	[1] 1.04	19.92	57.82	379.92	53.41	[1] 1.04	19.92	57.82
Housing	128.82	11.38	[1] 1.86	[1] 4.33	[1] 3.60	84.74	11.91	[1] 1.86	[1] 4.33	[1] 3.60
Fuel and light	53.45	4.74	.....	8.76	27.11	39.08	5.49	.....	8.76	27.11
Miscellaneous	241.52	21.43	[1] .40	13.82	43.16	114.02	16.03	[1] .58	14.13	43.85
Total	1,127.31	100.00	[1] .40	13.82	43.16	711.38	100.00	[1] .58	14.13	43.85

[1] Decrease.

AVERAGE EXPENDITURES AND PER CENT OF AVERAGE TOTAL EXPENDITURES OF FAMILIES IN SPECIFIED SHIPBUILDING DISTRICTS IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND THE PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917, OVER THE PRICES IN 1914—Continued.

JACKSONVILLE, FLA.

Item of expenditure.	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.			Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.		
	Average.	Per cent.	1915	1916	1917	Average.	Per cent.	1915	1916	1917
	54 white families.					27 colored families.				
Clothing:										
Males	$90.96	7.15	10.35	35.06	74.76	$63.99	7.22	10.35	35.06	74.76
Females	75.29	5.92	10.61	32.03	68.49	45.60	5.14	10.61	32.03	68.49
Total	166.25	13.07	10.47	33.69	71.92	109.59	12.36	10.46	33.80	72.15
Furniture and furnishings	50.59	3.98	15.13	43.42	73.73	27.95	3.15	15.13	43.42	73.73
Food	533.09	41.91	[1] .26	17.57	50.83	392.19	44.25	[1] .26	17.57	50.83
Housing	164.50	12.93	[1] 6.87	[1] 18.15	[1] 18.65	133.59	15.07	[1] 6.87	[1] 18.15	[1] 18.65
Fuel and light	62.32	4.90	.....	2.30	15.07	58.31	6.58	.....	2.30	15.07
Miscellaneous	295.15	23.21	1.27	14.66	41.63	164.81	18.59	.76	13.19	39.20
Total	1,271.90	100.00	1.27	14.66	41.63	886.44	100.00	.76	13.19	39.20

PENSACOLA, FLA.

	65 white families.					27 colored families.				
Clothing:										
Males	$73.02	6.20	0.46	9.84	38.45	$46.19	5.68	0.46	9.84	38.45
Females	74.91	6.37	2.04	18.27	47.58	52.37	6.43	2.04	18.27	47.58
Total	147.93	12.57	1.26	14.11	43.08	98.56	12.11	1.30	14.32	43.30
Furniture and furnishings	38.50	3.27	4.43	10.53	53.66	16.82	2.07	4.43	10.53	53.66
Food	555.47	47.19	[1] .26	17.57	50.83	414.88	50.97	[1] .26	17.57	50.83
Housing	135.75	11.53	[1] 5.13	[1] 7.07	[1] 6.05	70.73	8.69	[1] 5.13	[1] 7.07	[1] 6.05
Fuel and light	54.79	4.65	.....	4.25	18.11	45.54	5.60	.....	4.25	18.11
Miscellaneous	244.77	20.79	[1] .52	12.36	39.52	167.36	20.56	[1] .41	13.26	41.23
Total	1,177.21	100.00	[1] .52	12.36	39.52	813.89	100.00	[1] .41	13.26	41.23

TAMPA, FLA.

	51 white families.					28 colored families.				
Clothing:										
Males	$77.18	6.91	3.24	18.12	45.75	$43.77	5.23	3.24	18.12	45.75
Females	59.52	5.33	5.85	27.31	56.05	56.07	6.71	5.85	27.31	56.05
Total	136.70	12.24	4.38	22.12	50.24	99.84	11.94	4.71	23.28	51.54
Furniture and furnishings	36.55	3.27	9.54	24.63	51.17	20.24	2.42	9.54	24.63	51.17
Food	498.82	44.67	[1] .26	17.57	50.83	394.91	47.21	[1] .26	17.57	50.83
Housing	135.61	12.14	[1] .77	[1] 4.53	[1] 5.94	118.53	14.17	[1] .77	[1] 4.53	[1] 5.94
Fuel and light	47.08	4.22	[1] .98	2.82	12.68	40.44	4.83	[1] .98	2.82	12.68
Miscellaneous	261.86	23.45	.78	14.28	39.64	162.47	19.42	.64	13.86	38.67
Total	1,116.62	100.00	.78	14.28	39.64	836.43	100.00	.64	13.86	38.67

[1] Decrease.

AVERAGE EXPENDITURES AND PER CENT OF AVERAGE TOTAL EXPENDITURES OF FAMILIES IN SPECIFIED SHIPBUILDING DISTRICTS IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND THE PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917, OVER THE PRICES IN 1914—Continued.

BRUNSWICK, GA.

Item of expenditure.	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.			Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.		
	Average.	Per cent.	1915	1916	1917	Average.	Per cent.	1915	1916	1917
	35 white families.					15 colored families.				
Clothing:										
Males	$86.65	7.52	1.84	10.66	48.24	$52.76	6.31	1.84	10.66	48.24
Females	79.38	6.88	.44	8.02	36.91	64.07	7.67	.44	8.02	36.91
Total	166.03	14.40	1.17	9.40	42.83	116.83	13.98	1.07	9.21	42.02
Furniture and furnishings	43.46	3.77	.89	16.90	59.62	25.12	3.01	.89	16.90	59.62
Food	494.46	42.89	[1] .26	17.57	50.83	404.04	48.36	[1] .26	17.57	50.83
Housing	117.87	10.23	[1] .35	[1] 2.26	[1] 2.13	85.88	10.28	[1] .35	[1] 2.26	[1] 2.13
Fuel and light	65.07	5.64	.....	4.10	13.15	60.77	7.27	.....	4.10	13.15
Miscellaneous	265.94	23.07	.07	12.38	39.96	142.92	17.10	.02	12.50	39.79
Total	1,152.83	100.00	.07	12.38	39.96	835.56	100.00	.02	12.50	39.79

SAVANNAH, GA.

	40 white families.					14 colored families.				
Clothing:										
Males	$105.33	8.18	.....	25.62	60.03	$63.58	7.18	.....	25.62	60.03
Females	89.18	6.92	1.65	22.21	52.51	64.84	7.33	1.65	22.21	52.51
Total	194.51	15.10	.76	24.06	56.58	128.42	14.51	.83	23.90	56.23
Furniture and furnishings	36.28	2.82	1.84	12.75	50.67	27.95	3.16	1.84	12.75	50.67
Food	563.77	43.78	[1] .26	17.57	50.83	393.10	44.43	[1] .26	17.57	50.83
Housing	135.28	10.51	[1] 1.44	[1] 3.04	[1] 4.32	92.89	10.50	[1] 1.44	[1] 3.04	[1] 4.32
Fuel and light	65.71	5.10	[1] 1.30	[1] 1.65	21.11	53.34	6.03	[1] 1.30	[1] 1.65	21.11
Miscellaneous	292.18	22.69	[1] .21	14.59	42.49	189.12	21.37	[1] .21	14.32	42.18
Total	1,287.73	100.00	[1] .21	14.59	42.49	884.82	100.00	[1] .21	14.32	42.18

SLIDELL, LA.

	50 white families.					Colored families.[2]				
Clothing:										
Males	$83.27	8.01	0.24	11.92	38.66	.....	.....	.....	.....	.....
Females	59.39	5.72	.....	9.28	44.25	.....	.....	.....	.....	.....
Total	142.66	13.73	.14	10.82	40.99	.....	.....	.....	.....	.....
Furniture and furnishings	28.88	2.78	.36	10.83	42.15	.....	.....	.....	.....	.....
Food	538.55	51.84	[1] 1.04	19.92	57.32	.....	.....	.....	.....	.....
Housing	90.26	8.69	.....	.....	.....	.....	.....	.....	.....	.....
Fuel and light	39.83	3.83	4.72	11.78	32.56	.....	.....	.....	.....	.....
Miscellaneous	198.71	19.13	.41	15.54	46.69	.....	.....	.....	.....	.....
Total	1,038.89	100.00	.41	15.54	46.69	.....	.....	.....	.....	.....

[1] Decrease. [2] None reported.

AVERAGE EXPENDITURES AND PER CENT OF AVERAGE TOTAL EXPENDITURES OF FAMILIES IN SPECIFIED SHIPBUILDING DISTRICTS IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND THE PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917, OVER THE PRICES IN 1914—Continued.

MADISONVILLE, LA.

Item of expenditure.	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.			Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.		
	Average.	Per cent.	1915	1916	1917	Average.	Per cent.	1915	1916	1917
	27 white families.					26 colored families.				
Clothing:										
Males	$74.50	7.35	0.53	8.85	38.97	$56.11	6.58	0.53	8.85	38.97
Females	58.39	5.76	.83	13.45	47.78	54.00	6.34	.83	13.45	47.78
Total	132.89	13.11	.66	10.87	42.84	110.11	12.92	.68	11.11	43.29
Furniture and furnishings	23.35	2.31	1.48	22.06	58.70	15.45	1.81	1.48	22.06	58.70
Food	539.07	53.19	[1] 1.04	19.92	57.32	465.97	54.67	[1] 1.04	19.92	57.32
Housing	113.54	11.20	.....	.....	.....	64.76	7.60	.....	.....	.....
Fuel and light	27.71	2.74	8.67	12.74	35.50	30.63	3.59	8.67	12.74	35.50
Miscellaneous	176.88	17.45	[1] .24	15.60	46.56	165.47	19.41	[1] .18	16.36	48.72
Total	1,013.44	100.00	[1] .24	15.60	46.56	852.39	100.00	[1] .18	16.36	48.72

MOSS POINT, MISS.

	26 white families.					Colored families.[2]				
Clothing:										
Males	$64.05	7.01	.....	1.95	24.84	.....	.....	.....	.....	.....
Females	58.52	6.40	.....	.41	46.22	.....	.....	.....	.....	.....
Total	122.57	13.41	.....	1.21	35.04	.....	.....	.....	.....	.....
Furniture and furnishings	27.50	3.01	0.16	2.64	31.93	.....	.....	.....	.....	.....
Food	490.48	53.65	[1] 1.04	19.92	57.32	.....	.....	.....	.....	.....
Housing	62.82	6.87	.....	.....	.....	.....	.....	.....	.....	.....
Fuel and light	31.49	3.44	1.89	6.61	14.48	.....	.....	.....	.....	.....
Miscellaneous	179.42	19.62	[1] .61	13.88	45.92	.....	.....	.....	.....	.....
Total	914.28	100.00	[1] .61	13.88	45.92	.....	.....	.....	.....	.....

PASCAGOULA, MISS.

	32 white families.					19 colored families.				
Clothing:										
Males	$86.04	7.90	1.97	4.72	43.49	$48.20	6.31	1.97	4.72	43.49
Females	66.16	6.08	1.50	18.17	53.12	35.83	4.69	1.50	18.17	53.12
Total	152.20	13.98	1.77	10.57	47.68	84.03	11.00	1.77	10.45	47.60
Furniture and furnishings	28.28	2.60	.59	22.34	69.20	18.65	2.44	.59	22.34	69.20
Food	592.08	54.39	[1] 1.04	19.92	57.32	442.52	57.91	[1] 1.04	19.92	57.32
Housing	90.50	8.31	[1] 1.10	[1] 2.36	4.84	54.33	7.11	[1] 1.10	[1] 2.36	4.84
Fuel and light	39.95	3.67	.....	12.50	25.00	40.50	5.30	.....	12.50	25.00
Miscellaneous	185.61	17.05	[1] .48	15.86	49.38	124.07	16.24	[1] .56	16.39	49.89
Total	1,088.62	100.00	[1] .48	15.86	49.38	764.10	100.00	[1] .56	16.39	49.89

[1] Decrease. [2] None reported.

AVERAGE EXPENDITURES AND PER CENT OF AVERAGE TOTAL EXPENDITURES OF FAMILIES IN SPECIFIED SHIPBUILDING DISTRICTS IN 1917 FOR EACH OF THE PRINCIPAL ITEMS OF COST OF LIVING, AND THE PER CENT OF INCREASE IN THE RETAIL PRICE OF EACH IN 1915, 1916, AND 1917, OVER THE PRICES IN 1914—Concluded.

BEAUMONT, TEX.

Item of expenditure.	Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.			Expenditures per family.		Per cent of increase in retail prices in 1915, 1916, and 1917 over the prices in 1914.		
	Average.	Per cent.	1915	1916	1917	Average.	Per cent.	1915	1916	1917
	50 white families.					Colored families.[1]				
Clothing:										
Males	$76.94	5.99	2.36	24.56	58.65	.....	.....	.....	.....	.....
Females	65.33	5.09	6.29	30.09	60.41	.....	.....	.....	.....	.....
Total	142.27	11.08	4.17	27.10	59.46	.....	.....	.....	.....	.....
Furniture and furnishings	55.08	4.29	8.49	28.87	53.26	.....	.....	.....	.....	.....
Food	574.32	44.72	[2] 1.04	19.92	57.32	.....	.....	.....	.....	.....
Housing	223.15	17.37	[2] .01	.04	2.30	.....	.....	.....	.....	.....
Fuel and light	49.59	3.86	.....	5.96	10.95	.....	.....	.....	.....	.....
Miscellaneous	239.86	18.68	.44	16.46	43.44	.....	.....	.....	.....	.....
Total	1,284.27	100.00	.44	16.46	43.44	.....	.....	.....	.....	.....

HOUSTON, TEX.

	91 white families.					Colored families.[1]				
Clothing:										
Males	$89.43	7.12	3.11	24.76	49.32	.....	.....	.....	.....	.....
Females	82.34	6.56	2.18	25.34	53.85	.....	.....	.....	.....	.....
Total	171.77	13.68	2.66	25.04	51.49	.....	.....	.....	.....	.....
Furniture and furnishings	40.21	3.20	6.12	29.62	62.31	.....	.....	.....	.....	.....
Food	581.25	46.28	[2] 1.04	19.92	57.32	.....	.....	.....	.....	.....
Housing	153.45	12.22	[2] 2.29	[2] 7.64	[2] 7.72	.....	.....	.....	.....	.....
Fuel and light	44.23	3.52	[2] .85	8.28	22.70	.....	.....	.....	.....	.....
Miscellaneous	264.97	21.10	[2] .29	16.41	44.89	.....	.....	.....	.....	.....
Total	1,255.88	100.00	.29	16.41	44.89	.....	.....	.....	.....	.....

ORANGE, TEX.

	45 white families.					Colored families.[3]				
Clothing:										
Males	$84.30	7.09	1.07	14.42	42.21	.....	.....	.....	.....	.....
Females	71.08	5.98	9.86	35.65	71.53	.....	.....	.....	.....	.....
Total	155.38	13.07	5.09	24.13	55.62	.....	.....	.....	.....	.....
Furniture and furnishings	49.96	4.20	13.65	33.91	65.10	.....	.....	.....	.....	.....
Food	593.83	49.97	[2] 1.04	19.92	57.32	.....	.....	.....	.....	.....
Housing	140.96	11.86	[2] 2.49	1.90	7.41	.....	.....	.....	.....	.....
Fuel and light	35.04	2.95	.....	.....	2.34	.....	.....	.....	.....	.....
Miscellaneous	213.30	17.95	.52	17.99	48.26	.....	.....	.....	.....	.....
Total	1,188.47	100.00	.52	17.99	48.26	.....	.....	.....	.....	.....

[1] Number too small to be significant for comparative purposes.
[2] Decrease.
[3] None reported.

The figures in the first and sixth figure columns of the table show the average expenditures per family for the year 1917 for each of the principal items that enter into the cost of living. The second and seventh figure columns show in the form of percentages the proportion of the total amount expended for each item. The remaining columns show the average per cent of increase in the retail prices of each item in 1915, 1916, and 1917 over the prices in 1914. The increase in these retail prices as shown in this table was obtained by personal visits of the agents of the bureau to retail dealers patronized by workers in shipbuilding establishments in each locality.

The term "miscellaneous" includes expenditures for all items—such as tobacco, liquors, cleaning supplies, amusements, vacation, etc., varying in number and amount—not included in the items specified. The increase in the cost of many of these miscellaneous items could not be traced through the period owing to changes in quality or size of unit, but it has been assumed that the percentage of increase has been approximately the same as the average increase of all items combined.

The average per cent of increase for the total of all items each year is computed by multiplying the proportion of expenditure for each item by the per cent of increase in the retail prices of that item as compared with 1914 and dividing the aggregates of the products thus obtained by 100.

COST OF LIVING OF A FAMILY IN NORWAY.[1]

The following is an estimate of the cost of living for a Government employee,[2] wife, and four children, as given in the Bergens Tidende (Norway) of December 30, 1917.

The difference in cost between a family of two or three children and one of four children is not great and can easily be reckoned. The quantities given are those allowed by the food control board, and the prices given are either maximal or current prices. Many of the items are taken from practical experience. The taxes and pension charges are based on an income of $1,340. The family must be without servants, and the wife herself must sew, repair, wash, and iron, if this is possible. The estimate follows:

Rent	$193.00
Life insurance of $1,070	21.40
Taxes	93.80
Schooling	32.20

[1] Translation contained in report of American consul at Bergen, Norway, to State Department, under date of Jan. 2, 1918.

[2] A "Statsfunktionær" is a Government employee of about the standing of railroad trainmen, mail carriers, street-car conductors, etc., who live on about the same scale as the better class of highly paid skilled labor.

Trips and vacations		$20.20
Fire insurance		1.30
Pension fees, 10 per cent		134.00
Doctor and medicines (healthy people)		5.40
Societies		2.70
Deterioration on house (3 per cent of $1,340)		40.20
1 box of cigars	$2.10	
1 pipe	.70	
Tobacco, 18¾ cents per week	9.80	
		12.60
1 daily paper	3.20	
1 trade journal	1.30	
1 periodical	1.60	
2 novels	4.00	
2 trade books	4.00	
		14.10
2 measures of wood	21.50	
Hauling	6.40	
20 hectoliters coke, at $1.30	26.00	
4 hectoliters coke, at $3.20	12.80	
Hauling	3.20	
Electricity for light and heating	38.40	
		108.30
200 grams bread per day per person	46.70	
60 grams grains, etc., per day per person	42.30	
2 liters milk per day at 10 cents	73.00	
350 grams butter per week per person	85.00	
Vegetables	9.40	
1 kilogram sugar per month per person	22.50	
¾ kilogram coffee per month per person	19.30	
1½ kilogram tea	5.60	
Soap, soda, cleansers, etc	16.10	
Salt, spices, onions, etc	6.40	
¼ kilogram potatoes per day per person	26.70	
½ kilogram meat per week per person	104.50	
400 grams fish per person	27.10	
Fruit, berries	10.70	
		495.30
Clothes for the man.		
1 suit with 2 pairs trousers	34.80	
2 pairs socks	2.10	
1 suit underclothes	4.00	
Overcoat	21.40	
1 pair boots	10.70	
1 pair rubbers	2.70	
2 shirts	4.00	
1 hat	2.70	
Collars and neckties	4.00	
1 pair of gloves	2.10	
		88.50
Clothes for the wife.		
1 suit or dress	24.10	
2 pairs stockings	2.00	
Underwear	6.70	

2 shirt waists	$5.90	
1 hat, winter or summer	5.90	
1 pair shoes	10.70	
1 pair rubbers	2.70	
Overcoat	16.10	
1 pair gloves	1.90	
		$76.00

Clothes for the children.

[Most of the man's clothes are made over for the children.]

1 suit per child	24.10	
1½ pairs shoes per child	36.20	
Underclothes, 4 sets	10.70	
Stockings, 8 pairs	7.20	
Various linen	8.00	
Mittens, 4 pairs	2.70	
		88.90
Repairs to shoes, etc		71.80
Help for the big washing, twice a year		5.60
Various contingencies		26.80
Total		1,532.10
Salary		1,340.00
Deficit		192.10

The clothing account is low, and is furthermore underestimated in many of the items.

INCREASED COST OF LIVING IN SOUTH AFRICA.

The American consul at Cape Town, South Africa, forwarded to the State Department, under date of February 25, 1918, the following statements regarding the increased cost of living in the principal cities of that country during the course of the War. The data were taken from a report of the cost of living commission made in January, 1918.

PER CENT OF INCREASE IN COST OF LIVING IN SOUTH AFRICA, JANUARY, 1918, AS COMPARED WITH JULY, 1914.

City.	Excluding rents.	Including rents.
Cape Town	39.06	30.15
East London	42.23	31.59
Pretoria	38.72	25.95
Maritzburg	50.46	38.26
Bloemfontein	40.83	26.35
Port Elizabeth	39.86	30.29
Kimberley	33.98	23.31
Johannesburg	35.29	24.07
Durban	45.02	33.13

Rents do not appear to have increased at East London, Kimberley, Pretoria, and Bloemfontein since the War started. At Port

Elizabeth the rent of some centrally located properties rose about 10 s. ($2.43) a month. At Johannesburg there was, on the average, a small reduction. At Maritzburg rents increased about 4 per cent.

COST OF LIVING IN NEW SOUTH WALES.

The official yearbook of New South Wales for 1916 contains a chapter showing the rise in the cost of living in 1916 as compared with 1911, embracing a table giving the index numbers of meat, other foods, and groceries, and the two classes combined for each month from July, 1914, taken as the base or 100 to July, 1917. From this table it appears that in July, 1917, the index number for meat was 162.5; for other foods and groceries, 121.6; and for both classes combined, 132.1. Another table shows that from 1911 to 1916, taking the former year as the base or 100, meat prices increased 132.5 per cent; other food and groceries, 27.9 per cent; both classes combined, 49.7 per cent; rent, 11.7 per cent; and food and rent combined, 32.7 per cent.

The following table taken from this report shows the weekly consumption of certain commodities, the average price, and the weekly cost in 1911 and 1916, the increase in weekly cost in the latter year representing a total of $2.47, or 45.5 per cent:[1]

WEEKLY CONSUMPTION AND COST OF SPECIFIED ARTICLES OF FOOD IN NEW SOUTH WALES IN 1911 AND 1916, PER FAMILY OF FIVE PERSONS.

Article of food.	Unit.	1911			1916		
		Weekly consumption.	Average price.	Weekly cost.	Weekly consumption.	Average price.	Weekly cost.
			Cents.			*Cents.*	
Beef	Pound	13.6	8.3	$1.13	9.5	20.1	$1.91
Mutton	do	9.3	6.7	.62	7.0	15.8	1.11
Pork	do	.3	16.4	.05	.2	24.6	.05
Bacon and ham	do	.8	19.5	.16	.8	30.7	.25
Fish, fresh, etc	do	.6	17.7	.11	1.1	21.5	.23
Fish, preserved	do	.4	19.3	.08	.5	23.3	.12
Potatoes	do	17.4	1.8	.32	14.4	2.6	.38
Flour	do	4.0	2.6	.11	4.0	3.5	.14
Bread	2-pound loaf.	10.0	7.1	.71	9.2	8.1	.75
Rice	Pound	.8	5.5	.04	.8	6.5	.05
Sago and tapioca	do	.2	5.5	.01	.2	6.5	.01
Oatmeal	do	.7	5.1	.04	.6	5.7	.03
Sugar	do	6.0	5.5	.33	6.0	7.1	.43
Jam	do	1.6	8.9	.14	1.7	12.2	.21
Butter	do	2.5	27.4	.69	2.9	35.1	1.02
Cheese	do	.3	19.1	.06	.3	24.6	.07
Milk, fresh	Quart	6.8	8.7	.59	7.6	11.2	.85
Tea	Pound	.7	31.5	.22	.7	36.7	.26
Coffee	Ounce	1.1	2.2	.02	1.3	2.2	.03
Total				5.43			7.90

[1] The reason for the difference in this per cent and the 49.7 per cent shown above, it is explained, is due to the fact that in computing the price levels the regimen was assumed to be constant. The difference was most marked in regard to meat, the price level of which increased by 132.5 per cent, but, on account of reduced consumption, the weekly bill was only 69 per cent higher.

WAGES AND HOURS OF LABOR.

WAGE INCREASES IN UNITED STATES NAVY YARDS.

A general adjustment was made in United States navy yard wage rates on the Atlantic coast November 1, 1917, and on the Pacific coast December 1, giving an increase to nearly all employees. Another adjustment was made in the Pacific yards in February, 1918. The rates for the Atlantic coast as of January 1, 1917, and November 1, 1917, were published in the MONTHLY REVIEW for December, 1917 (pp. 103–109).

Following a conference with the representatives of the employees another general adjustment has been made by the Navy Department for the Atlantic coast, effective May 1, 1918. This adjustment has resulted in an increase for practically all employees.

The new daily wage rates for the Atlantic coast and the earlier established rates for the Pacific coast are set forth in the table following, in which is shown the rates in force in all yards on May 1, 1819. The rates here published are maximum basic rates. The maximum rate is the predominant rate and for many occupations it is the only rate. It is estimated by the Navy Department that about two-thirds of the employees as a whole receive the maximum rate of the occupation in which employed. In the greater number of occupations, however, there are one or two lower rates paid. In such cases the minimum rate is $1.04 per day lower than the maximum. Each intermediate rate was raised the same amount per day as the maximum and minimum. The regular hours of labor are eight per day.

In addition to the rates given in the table a bonus is provided under a separate appropriation for persons in the service on and since July 1, 1917. All such employees rated at $3.84 a day or under are paid a bonus of 10 per cent, and those rated above $3.84 up to $5.76 a day are paid a bonus of 5 per cent. It is estimated that about one-half of the employees under the latest ratings as here tabulated receive a bonus.

In the eastern adjustment of November 1 the increase as a whole was about 10 per cent and to quite an extent the rates were equalized and standardized; the classifications within an occupation were reduced from as many as five to three or less. In the last adjustment still further action was taken in the way of equalization and standardization and in the leveling up of rates between the several yards. The amount of the increase in the maximum rates varied widely, but the average was about 15 per cent in Group I, 30 per cent in Group II, and 20 per cent in Group III. The adjustment further provides for 5 per cent additional for night work.

The three groups of the table include in a general way common abor, semiskilled labor, and skilled trades. The minimum and intermediate rates are not shown.

MAXIMUM BASIC RATES OF WAGES PER DAY (EIGHT HOURS) IN UNITED STATES NAVY YARDS AS OF MAY 1, 1918.

[The rate stated is the maximum basic rate. There are one or more lower rates paid in many occupations. In such cases the minimum is $1.04 lower than the maximum. In addition employees in the service on and since July 1, 1917, receive a bonus; those rated at $3.84 a day or less receive a 10 per cent bonus, and those rated above $3.84 a day up to $5.76 a day receive a 5 per cent bonus. It is estimated that about two-thirds of the employees receive the maximum rate and about one-half receive the bonus.]

Rating (occupation).	Portsmouth, N. H.	Boston, Mass.	Newport, R. I.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Indianhead, Md.	Norfolk, Va.	Charleston, S. C.	New Orleans, La.	Pensacola, Fla.	Mare Island, Cal.	Puget Sound, Wash.
Group I.													
Attendants, battery							$4.00						
Attendants, dispensary	$3.20	$3.20		$3.20	$3.20	$3.20		$3.20		$2.40			$3.60
Attendants, powder factory							4.64						
Charwomen						2.40							2.80
Coal handlers					3.04								[1]4.00
Deck hands			$3.04										
Deck hands, ferryboat			3.04										
Hod carriers			3.68	3.68	3.68	3.36	3.20	3.20	$2.80	2.80		$4.08	
Janitors	3.20	3.20	3.20	3.20		3.20	3.20	3.20	2.40	2.40	$2.40	3.60	
Laborers, common	3.20	3.20	3.20	3.20	[2]3.20	3.20	3.20	3.20	2.40	2.40	2.40	3.60	[3]3.60
Stable keepers	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	2.40			3.92	3.92
Teams, double							5.20						
Teamsters with teams													7.04
Group II.													
Boys	2.00	2.00	2.00	2.00	2.00		2.00	2.00	2.00	2.00	2.00	2.16	2.16
Cupola tenders					5.76	5.76			5.76		5.76		
Dredgers									2.96			4.08	
Hammer runners	4.40	4.40			4.40	4.40				4.40			
Helpers, blacksmiths'			4.00			4.00	4.00		4.00		4.00		
Helpers, boat builders'					3.68								4.00
Helpers, boiler makers'	3.68	3.68		3.68	3.68	3.68		3.68	3.68	3.68	3.68	4.32	4.32
Helpers, coppersmiths'	3.68	3.68		3.68	3.68	3.68		3.68	3.68		3.68	4.32	4.32
Helpers, divers'				3.68				3.68					
Helpers, electricians'	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68		3.68	4.00	4.00
Helpers, flange turners'	3.68												
Helpers, forgers', heavy		4.40											
Helpers, general	3.68	3.68	3.68	3.68	[2]3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.60	3.60
Helpers, laboratory		3.68	3.68	3.68		3.68	3.68				3.68	4.00	
Helpers, laborers'												3.60	3.60
Helpers, machinists'	3.68	3.68	3.68	3.68	[2]3.68	3.68	3.68	3.68	3.68	3.68	3.68	4.00	4.00
Helpers, metal workers'				3.68									
Helpers, molders'	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	3.68	4.00	4.00
Helpers, ordnance				3.68	3.68			3.68				4.00	4.00
Helpers, painters'		3.44			[2]3.44				3.44	3.44	3.44	4.00	4.00
Helpers, pattern makers'									3.68				
Helpers, pipe fitters'	3.68	3.68		3.68	3.68	3.68	3.68	3.68	3.68		3.68	4.00	4.00
Helpers, plumbers'							3.68						
Helpers, riggers'		3.68		3.68	3.68			3.68	3.68			4.00	4.00
Helpers, rope makers'		3.68											
Helpers, sheet-metal workers'					[2]3.68	3.68	3.68	3.68	3.68	3.68	3.68	4.00	4.00
Helpers, ship fitters'	3.68	3.68			3.68			3.68	3.68	3.68	3.68	4.00	4.00
Helpers, ship smiths'	4.00	4.00		4.00	4.00			4.00				4.32	4.32
Helpers, shipwrights'					3.68								
Helpers, smiths'										4.00			
Helpers, steel workers'									3.68				
Helpers, woodworkers'	3.68	3.68		3.68	[2]3.68	3.68	3.68	3.68	3.68	3.68	3.68	4.00	4.00
Holders-on	4.00	4.00		4.00	4.00			4.00	4.00			4.64	4.64
Inspectresses			3.60										
Laundrymen											2.24		
Oilers					4.00	4.00	4.00	4.00			4.00		
Operators, female	3.68												
Primer workers, female			3.04										
Rivet heaters	3.04	3.04		3.04	3.04			3.04	3.04			3.04	
Teamsters	3.52	3.52	3.52	3.52	3.52		3.52	3.52	3.52	3.52		3.84	3.84

[1] Trimming, $4.40. [2] Females are paid same rate. [3] At plant, $4.

MAXIMUM BASIC RATES OF WAGES PER DAY (EIGHT HOURS) IN UNITED STATES NAVY YARDS AS OF MAY 1, 1918—Continued.

Rating (occupation).	Portsmouth, N. H.	Boston, Mass.	Newport, R. I.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Indianhead, Md.	Norfolk, Va.	Charleston, S. C.	New Orleans, La.	Pensacola, Fla.	Mare Island, Cal.	Puget Sound, Wash.
Group III.													
Acetylene operators	$5.20	$5.20		$5.20	$5.20			$5.20	$5.20	$5.20	$5.20	$5.84	$5.84
Angle smiths, heavy fires	7.04	7.04		7.04	7.04				7.04				5.84
Angle smiths, other fires	5.76	5.76		5.76	5.76				5.76				
Armature winders						$5.60							
Blacksmiths			$5.76			[1] 5.76	$5.76				5.76		
Block makers		3.92						3.92					5.84
Boat builders	5.60	5.60		5.60	5.60			5.60	5.60	5.60	5.60	6.64	6.64
Boiler makers	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.84	5.84
Bolters-up									4.00				
Box makers		4.16				4.16							
Brakemen								3.76					
Butchers			3.60					3.60				4.00	
Cable splicers						5.60					5.60		
Calkers, wood	5.60	5.60		5.60	5.60	5.60		5.60	5.60	5.60		6.64	6.64
Calkers and chippers, iron	5.60	5.60		5.60	5.60			5.60	5.60	5.60		5.84	5.84
Canvas workers						5.02							
Carpenters, house	5.60	5.60	5.60	5.60	5.60		5.60	5.60	5.60	5.60	5.60	5.84	5.84
Casting cleaners	4.00				4.00	4.00						4.00	
Cement finishers					5.28			5.28			5.28		
Chain makers		6.10											
Chauffeurs	3.60	3.60	3.60	3.60	3.60	3.84	3.60	3.60	3.60		3.60	4.10	4.10
Checkers								3.12					
Concrete workers		3.80			3.28				4.80	3.84		4.64	4.64
Coopers		4.32		4.32				4.32				4.88	
Coppersmiths	5.76	5.76	5.76	5.76	5.76	5.76		5.76	5.76	5.76	5.76	6.64	6.64
Cranemen		4.80		4.80	4.80	4.80		4.80	4.80				
Die sinkers	6.48	6.48		6.48		6.48		6.48		6.48		6.24	
Divers		6.00	6.72	9.60	9.60			9.04	8.00	10.00			10.00
Drillers	4.80	4.80		4.80	4.80			4.80	4.80	4.80		4.64	4.64
Drivers				3.92									
Electricians	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.84	5.84
Electricians, chronograph							6.72						
Electricians, radio	6.00	6.00			6.00	6.00		6.00	6.00	6.00	6.00	6.64	6.64
Electricians, storage-battery		6.88		6.88				6.88					
Electric-dredge operators									5.76				
Electric welders						5.20			5.20				5.84
Engineers	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.52	5.52
Engineers, cranes over 3 tons	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60
Engineers, electrical								5.20					
Engineers, fire												5.52	
Engineers, locomotive								5.20					
Engineers, marine				5.20			5.20						
Engineers, pile-driver				5.20	5.20						5.20		
Fabric workers											4.24		
Farriers	4.72			4.72	4.72								
Firemen	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Flag makers												3.36	
Flange turners	6.00	6.00		6.00	6.00			6.00	6.00			6.64	6.64
Forgers, drop		5.60		5.60		5.60		5.60				6.96	
Forgers, heavy	10.80	10.80	10.80	10.80	10.80	10.80		10.80	10.80			7.12	7.12
Foundry chippers			4.00	4.00									
Frame benders	6.24				6.24				6.24			6.64	6.64
Furnace men, forge						4.40		4.40		4.40		4.96	
Furnace men, foundry			4.40		4.40	4.40		4.40			4.40	4.96	4.96
Furnace men, heaters		4.40				4.40							
Furnace men, open-hearth						4.40							
Galvanizers	4.32	4.32		4.32	4.32			4.32	4.32	4.32	4.32	5.04	5.04
Gardeners	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	4.00	4.00
Hoisting men		4.16		4.16									
Instrument makers				6.24							6.24	[2] 6.32	6.32
Iron workers							5.76						
Joiners	5.60			5.60		5.60		5.60		5.60	5.60		
Joiners, ship		5.60			5.60	5.60			5.60			6.64	6.64
Ladle men, foundry						4.40							
Lead burners							6.88						
Leather workers	4.24					4.80						4.64	
Lens grinders, telescope						5.76							
Letterers and grainers			5.36	5.36		5.36							
Levelers	4.48	4.48			4.48	4.48							
Linemen									3.60		3.60		

[1] Heavy fires, $7.04.

[2] Electrical.

MAXIMUM BASIC RATES OF WAGES PER DAY (EIGHT HOURS) IN UNITED STATES NAVY YARDS AS OF MAY 1, 1913—Concluded.

Rating (occupation).	Portsmouth, N. H.	Boston, Mass.	Newport, R. I.	New York, N. Y.	Philadelphia, Pa.	Washington, D. C.	Indianhead, Md.	Norfolk, Va.	Charleston, S. C.	New Orleans, La.	Pensacola, Fla.	Mare Island, Cal.	Puget Sound, Wash.
Group III—Concluded.													
Loftsmen		$6.64			$6.64				$6.64			$6.64	$6.64
Machine operators	$4.40		$5.04			[1]4.56						4.40	4.40
Machinists	5.76	5.76		$5.76	5.76			$5.76	5.76	$5.76		5.84	5.84
Machinists, all round			5.76			5.76	$5.76				$5.76		
Machinists, electrical	5.76					5.76	5.76				5.76	5.84	
Machinists, floor or vice hands						5.76							
Machinists, torpedo			6.24										
Marine engine erectors												6.64	
Masons, brick	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.64	6.64
Masons, stone	6.00	6.00	6.00	6.00	6.00	6.00		6.00	6.00				
Mattress makers					4.24								
Melters	4.80	4.80		4.80		4.80							
Melters, open hearth						7.44							
Metallic cartridge case makers						5.04							
Millmen		5.60		5.60	5.60	5.60			5.60		5.60		6.64
Millwrights		5.60									5.60		
Model makers, wood						5.60							
Model testers						4.72							
Molders	5.76	5.76	5.76	5.76	5.76	5.76		5.76	5.76	5.76	5.76	5.84	5.84
Molders, irregular woodwork	5.60												
Molders, steel castings					5.76	5.76							
Motormen					3.84		3.84						
Oakum spinners		3.36						3.36					
Ordnance men	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88			5.28	5.28
Packers	3.60	3.60	3.60	3.60				3.60	3.60		3.60	4.08	4.08
Painters	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	5.52	5.52
Painters, bitumastic	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76		6.64
Pattern makers	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	7.20	7.20
Pavers		5.04		5.04	5.04			5.04	5.04				
Pile drivers								4.72		4.72	4.72		5.52
Pilots, ferryboat			4.72										
Pipe coverers					4.64			4.64	4.64	4.64	4.64	5.52	5.52
Pipe fitters	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.84	5.84
Plasterers	5.92	5.92	5.92	5.92	5.92	5.92		5.92	5.92	5.92	5.92	6.64	6.64
Plumbers, house	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76	5.76		5.76	5.84	
Plumbers, ship	5.76	5.76		5.76	5.76			5.76	5.76	5.76		5.84	5.84
Polishers, buffers and platers	5.60	5.60	5.60	5.60	5.60	5.60		5.60	5.60	5.60	5.60	5.84	5.84
Pressmen				3.60									
Punchers and shearers	4.40	4.40		4.40	4.40			4.40	4.40	4.40		4.64	4.64
Railroad conductors					4.00			4.00					
Riggers	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.52	5.52
Riveters	5.60	5.60		5.60	5.60			5.60		5.60		5.84	5.84
Riveters, machine									5.60			5.84	
Rodmen	3.76		3.76	3.76	3.76	3.76	3.76	3.76		3.76	3.76	4.40	4.40
Rollers, brass and copper						5.20							
Rope makers		4.48											
Sail makers	5.28	5.28		5.28	5.28			5.28	5.28	5.28		5.84	5.84
Sand blasters		4.32				4.32							
Saw filers	5.92	5.92		5.92	5.92			5.92	5.92			6.64	6.64
Seamstresses				3.20	3.20	3.20		3.20				3.36	3.36
Sewing-machine operators					3.60								
Sheet-metal workers	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	5.60	6.64	6.64
Ship fitters	5.76	5.76		5.76	5.76			5.76	5.76	5.76	5.76	5.84	5.84
Shipsmiths, heavy fires	7.04	7.04		7.04	7.04			7.04	7.04	7.04		5.84	5.84
Shipsmiths, other fires	5.76	5.76		5.76	5.76			5.76	5.76	5.76			
Shipwrights	5.60	5.60		5.60	5.60	5.60		5.60	5.60	5.60		6.64	6.64
Spar makers	5.60												
Steam fitters									5.76				
Steel workers						5.76							
Stevedores				3.84								4.08	
Stonecutters	5.04	5.04				5.04		5.04					
Switchmen		3.76		3.76	3.76				3.76			4.08	
Toolmakers	6.24	6.24			6.24	6.24		6.24	6.24	6.24	6.24	6.08	6.08
Tool sharpeners								4.00	4.00				
Towermen													6.64
Trackmen	4.00	4.00				4.00	4.00	4.00	4.00		4.00	3.84	
Turbine bladers									5.76				
Upholsterers	4.48	4.48		4.48	4.48	4.48		4.48	4.48			5.44	5.44
Water tenders				4.32	4.32		4.32	4.32	4.32				
Wharf builders	5.04	5.04	5.04	5.04	5.04			5.04	5.04	5.04	5.04		5.44
Wheelwrights		4.56		4.56				4.56	4.56			4.88	
Wireworkers				4.40	4.40				4.40		4.40		
Woodworkers, aeroplane											5.60		

[1] Forging.

WAGE RATES FOR ARMY CONSTRUCTION WORK, MAY 1, 1918.

When the War Department began the construction of cantonments, camps, warehouses, etc., made necessary because of the War, it was provided that all civilians employed by contractors or by the Government in the building operations should be paid the generally accepted union wage scale of the locality or the prevailing wage rate for unorganized trades. The term "locality" was interpreted to include not only the immediate vicinity, but the general territory or district from which the labor supply was drawn.

The rates paid on the works have changed from time to time for the different trades and places as the rates have changed in the territory. The following table shows the prevailing rates in effect on May 1, 1918, in the principal trades on operations under the construction division of the War Department as reported to the department by officers in charge. The rates are per hour except as noted. Information was available for several other trades, but not in a sufficient number of places to warrant tabulation. At the time of the compilation reports had not been received from all points of operation. Some trades were not at work on May 1 at certain places and had not been for some time, and it is probable that in a few instances higher rates would have to be granted were operations to be resumed.

The table states the locality, the occupation, and the rate of wages paid. The regular hours of labor are eight per day. Generally time and a half is allowed for daily overtime and Saturday afternoon and double time for Sundays and holidays.

Care should be exercised in comparing the rates of one city with those of another as it is probable that some occupation terms have not been defined in the same way by officials in different places. It is also probable that the character of the work of an occupation differs in the several localities.

First in the table there are given the wage rates at the National Army and National Guard camps. Next is presented the rates on all other construction work under the charge of the construction division, arranged by geographical districts.

WAGE RATES PER HOUR ON ARMY CONSTRUC

[The rates are in cents per

Locality.	Blacksmiths.	Blacksmiths' helpers.	Bricklayers.	Bricklayers' helpers.	Carpenters.	Carpenters' helpers.	Calkers.	Cement finishers.	Cement mixers.
NATIONAL ARMY AND NATIONAL GUARD CAMPS.									
Alexandria, La.	50	30	87½	25	60	30	30	30	25
Anniston, Ala.	40	30	62½	25	40	30	40	62½	30
Augusta, Ga.	50	30	50	.....	52	46	30	50	.....
Charlotte, N. C.	50	25	60	25	50	25	.....	40	25
Deming, N. Mex.	87½	37½	87½	37½	75	25	62½	50	30
Fort Sill, Okla.	60	50	87½	35	60	35	50	62½	35
Fort Worth, Tex.	68¾	30	100	30	67½	25–50	81¼	75	66¾
Greenville, S. C.	40	20	40–45	18	25–50	25	.....	45	20
Hattiesburg, Miss.	40–60	.....	.....	.....	30–50	.....	.....	.....	.....
Houston, Tex.	45	25	87½	.....	62½	.....	.....	75	.....
Linda Vista, Cal.	62½	42½	75	37½	[5] 62½	42½	.....	62½	42½
Macon, Ga.	50	22½	60	25	50	22½	35½	40	35
Montgomery, Ala.	75	40	62½	25	35–45	25	50	62	25
Palo Alto, Cal.	62½	50	93¾	62½	68¾	37½	.....	81¼	68¾
Spartanburg, S. C.	.....	.....	50	22½	35–40	22½–25	.....	22½–25	22½
Waco, Tex.	35	.....	100	50	65	30–45	45	75	30
American Lake, Wash.	50–55	43¾	93¾	.....	75	37½	62½	68¾	62½
Admiral, Md.	62½	37	75	40	62½	40	.....	32–47	35
Atlanta, Ga.	62½	35	60–75	.....	50	30–35	30–62½	50–65	.....
Ayer, Mass.	65	37½	75	50	65	37½	50	75	37½
Battle Creek, Mich.	50	.....	75	45	60	.....	.....	55	45
Chillicothe, Ohio.	.....	.....	80	.....	60	40	.....	60	40
Columbia, S. C.	60	.....	65	.....	40	25	.....	70	.....
Des Moines, Iowa.	67½	40	86¼	40	70	40	.....	70	40
Fort Riley, Kans.	80	37	85	50	65	37½	60	65	37½
San Antonio, Tex.	62½	33⅓	87½	35	62½	40	45–62½	62½	62½
Little Rock, Ark.	56½	35	87½	35	60	.....	40	75	30
Louisville, Ky.	50	30	70	45	50	30	50	60	25–30
Petersburg, Va.	75	60	75	45	57	45	45	65	45
Rockford, Ill.	55	.....	75	45	62½	45	70	67½	.....
Wrightstown, N. J.	.....	.....	75	.....	70	.....	45	65	55
Yaphank, L. I., N. Y.	60	42½	75	.....	62½	37½	62½	70	.....
Black Point, Fla.	60	55	75	40	60	40	.....	75	40
Tenafly, N. J.	75	43¾	70	37½	62½	37½	56¼	70	37½
OTHER CONSTRUCTION WORK.									
District 1.									
Boston, Mass.	.....	.....	.....	.....	65	.....	.....	.....	.....
New Britain, Conn.	40–55	35–40	60–75	.....	55–65	35–50	.....	40–60	35–45
Saybrook, Conn.	.....	.....	70	.....	50	40	.....	.....	.....
New York City, N. Y.	50	43¾	81¼	.....	62½	40	.....	70	.....
Fox Hill, N. Y.	66¾–75	42½	81¼	42½	62½	.....	62½	70	40⅝
Otisville, N. Y.	75	40	.....	.....	68¾	40	75	.....	.....
Rochester, N. Y.	.....	.....	.....	.....	56¼	40	.....	.....	.....
Mineola, L. I.	.....	.....	81¼	37½	62½	37½	62½	75	37½
Brooklyn, N. Y.	50	.....	.....	.....	56¾	40⅝	.....	.....	.....
Arverne, L. I.	.....	.....	.....	.....	62½	43¾	.....	.....	.....
Baldwinsville, N. Y.	50	40	.....	.....	65	40	70	.....	.....
Buffalo, N. Y.	75	45	.....	.....	55	42½	55	.....	.....
Newark, N. J.	68¾	43¾	75	45	65	37½	62½	75	.....
Bonhamtown, N. J.	62½	50	70	40–45	62½	40	.....	75	.....
Colonia, N. J.	60	40	70	42½	62½	40	.....	65	40
Hoboken, N. J.	.....	.....	.....	.....	62½	31¼	.....	.....	.....
Woodbury, N. J.	.....	.....	75	.....	70	.....	.....	70	.....
Cape May, N. J.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bayonne, N. J.	62½	37½	.....	.....	62½	.....	.....	.....	.....
Little Silver, N. J.	50	33	.....	.....	65	31¼	.....	.....	.....
Philadelphia, Pa.	45	35	80	45	70	35	62½	70	.....
Pittsburgh, Pa.	40	.....	.....	.....	71	.....	.....	60	.....
Tullytown, Pa.	62½	45	.....	.....	70	.....	.....	.....	.....
Delaware City, Del.	.....	.....	.....	.....	60	.....	.....	62½	.....
Baltimore, Md.	50–60	40	75	40	62½	40	.....	62½	35
Fort McHenry, Md.	56¼	40	75	40	62½	35	.....	62½	.....
Aberdeen, Md.	62½	43¾	75	43¾	62½	40	.....	62½	75
Curtis Bay, Md.	50	40	75	43¾	62½	30	.....	62½	35
Fort Howard, Md.	.....	.....	75	31¼	62½	.....	.....	50	.....
Washington, D. C.	.....	.....	75	37½	62½	35	62½	.....	35
Perryville, Md.	62½	43¾	75	.....	62½	.....	.....	62½	.....
Curtis Bay, Md.	.....	.....	.....	.....	[16] 70	.....	70	.....	.....

[1] Rate per day.
[2] Gasoline engineers.
[3] Rate per month.
[4] Rate per week.
[5] Housed free.
[6] On concrete mixers.
[7] Outside wiremen.
[8] Hoisting engineers.
[9] Gas engine.

TION WORK IN EFFECT MAY 1, 1918.

hour unless otherwise specified.]

Cement workers.	Chauffeurs.	Electricians.	Electricians' helpers.	Electric linemen.	Electric linemen's helpers	Electric wiremen.	Engineers.	Engineers, ditch machine.	Engineers, stationary.	Engineers, steam roller.
30	[1] $3.00	65		65		65	[3] 50		30	
25	[1] $2.57	60	35	60	35	60				55
	[1] $2.00	50	40	50			60			
25	[1] $3.00	55	30	55	30	55				
50	41⅔	75	37½	75	37½	75		62½		
35	[1] $2.00	75	35	75	35	75		75	60	75
	[3] $75.00	75	37½	62½	30	75		82½	75	67½
20		45–55	25	40–50		30–40				
	[4] $17.50–$20.00	65⅔	32½⅓	50			62½	62½	62½	50
47½	[1] $3.00	[2] $5.25	40					60	60	60
30	20	60	30	60	30	60			60	60
50	[1] $3.00	60	35	60	35	60	82½–100	82½–100		62½
62½	37½ [5] 56¼	75		75	56¼			75		75
22½	[4] $21.00	60	30	50	30	60	[6] 25			50
	37½	75	42½	70	30	70	[1] 7.00			
43⅓		75	43¾	62½	37½	62½	75			75
35	[4] $20.00–$25.00	65	37½	82½	30–45	62½	50	80	50	72
	30		30–35	40–50		40–50			50–60	
37½	[1] $4.00–$5.00	70	50	50–62½	37½–40		75–83⅓	83⅓	75	75
35	25	71¼	50	71¼	50	71¼	50	70	60	50
	30	62½		62½		62½				
20	20	62½	25	62½	25	62½				45
	[3] $85.00	65	40	70	40	[7] 70	[8] 80	[3] $160.00		60
37½	[4] $18.00–$24.00	68¾	50	68¾	50	68¾		50–60		60
62½	[1] $3.00–$3.50	68¾	30	49	25		[9] 62½		40–75	50
	[1] $3.00	75	35	50			[10] 65 [11] 75		40	55
30–35	[4] $15.00–$18.00	50	40	40	40	50	40	40	40	40
30	45	60	45	60	45	60	65	75		65
	[4] $21.00	75		50	42½	65	[9] 40		50	50
35		70	40							
40⅔	[4] $35.00	65	31¼	65	37½		60		62½	75
20	[1] $3.00	75	40	75	40	75	[9] 60	70	65	70
45	[1] $4.00	62½	43¾	62½	43¾	62½	81¼	[4] $68.00	81¼	81¼
		70								
35–45		55–65	35–50						50–60	
	$18.00	55								
		[12] 65	31¼				75			
	[4] $25.00–$30.00	65	31¼	65					62½	81¼
	[1] $3.00	65	40							68¾
		62½	37½							
75	[4] $25.00	[13] 90	[13] 56¼	[13] 90	[13] 56¼	[13] 90		100		75
		68¾	40⅔				43¾			
									62½	
	[3] $90.00						62½			
43¾	[1] $4.00	68¾	37½				75			
40–45	[4] $25.00	68¾	37½	68¾					75	
35	37½					68¾			75	
		68¾								
35–43¾	[1] $4.00	70					[14] $33.00			
	[4] $24.00								65	
	[4] $24.00	68¾	31¼–37½	68¾	31¼–37½	68¾				
35	35	75	46¼						75	
	35					68¾			70	70
	35	75						81¼		[4] $33.00
	35	75								
35	[4] $25.00	65	35–37½	65–60	37½	65	40–50	80	50–70	50–70
62½	[4] $20.00	62½	31¼	65	31¼	62½	75	75		70
	32	75	43¾				$6.50–$7.00	[15] 75	62½	75
35	40	65		65					70	50
		62½	31¼	62½		62½				
		70	25–37½				70		70	
			40							
40	35–50	75	43¾							

[10] Registered engineers.
[11] General engineers.
[12] Car fare paid.
[13] Includes 25 cents per hour for board.
[14] Weekly rate, pile drivers; pump, boiler, and mixer, $30.
[15] Hoisting.
[16] Ship—1st class.

WAGE RATES PER HOUR ON ARMY CONSTRUC

Locality.	Blacksmiths.	Blacksmiths' helpers.	Bricklayers.	Bricklayers' helpers.	Carpenters.	Carpenters' helpers.	Calkers.	Cement finishers.	Cement mixers.
OTHER CONSTRUCTION WORK—concluded.									
District 2.									
Pig Point, Va	50	35	75	30	53	30	.....	60	.....
Belvoir, Va	50	.....	85	37½	62½	35	.....	70	35
Norfolk, Va	.....	30	.....	30	53	30	40	60	30
Saltville, Va	.....	.....	75	.....	62½	40	.....	50	.....
Newport News, Va	[3] 50-62½	[3] 30-40	[3] 75	[3] 30-40	[3] 53	[3] 30	60	[3] 60	.....
Fort Monroe, Va	.....	.....	.....	.....	53	30	.....	.....	.....
Morrison, Va	50	.....	.....	.....	53	31¼	.....	60	30
Hampton, Va	40-58	.....	75	[1] $8.00	53	31	50	60	25-30
Charleston, W. Va	60-75	37½	75	37½	62½	37½	60	60	37½
Fort Caswell, N. C	.....	.....	[3] 53	.....	[3] 53	[3] 31	[3] 45	[3] 40	[3] 30
Fort Moultrie, S. C	.....	.....	50	25	35-50	25	.....	50	25
Charleston, S. C	50	28-33	45	33	37½-50	18¾	.....	.....	.....
Atlanta, Ga	50	35	65	.....	50	25	[5] 30-35	50-60	.....
Augusta, Ga	.....	.....	50	.....	50	40	.....	.....	.....
Pensacola, Fla	.....	.....	.....	.....	40-48	30-35	.....	85	30
Fort Dade, Fla	.....	.....	60	25	50	25	30	40	25
Arcadia, Fla	50	.....	70	.....	50	20	50	70	20
Arcadia, Fla	50	20	70	20	50	20	60	70	25
District 3.									
Dayton, Ohio	40	35	80	50	60	22-35	62½	50	35
Jeffersonville, Ind	.....	.....	.....	.....	60	.....	.....	50	.....
Indianapolis, Ind	.....	.....	75	42½-45	57½	35	.....	60	35
Chicago, Ill	54	43	75-81¼	45-50	70-80	45-50	60	67½	45
Rantoul, Ill	62½	50	82½	50	62½	35	62½	50	35
Belleville, Ill	.....	.....	85	35	62½	35	.....	.....	40
Rock Island, Ill	.....	.....	81¼	.....	.....	.....	.....	.....	.....
Kenosha, Wis	.....	.....	.....	.....	70	.....	.....	67½	.....
Mount Clemens, Mich	55	.....	75	.....	60	.....	.....	60	.....
District 4.									
Nashville, Tenn	55	30	70	.....	55	40	.....	70	.....
Montgomery, Ala	50	.....	75	25	50	.....	75	60	50
Pike Road, Ala	50	.....	.....	.....	50	.....	75	60	.....
Mobile, Ala	.....	.....	.....	.....	50-75	36-54	.....	.....	.....
West Point, Miss	37½-62½	.....	70	.....	55	30-40	.....	72	40-50
Lonoke, Ark	60	30	87½	30	60	30	60	60	30
District 5.									
Des Moines, Iowa	.....	.....	81¼	.....	65	40	.....	65	40
St. Louis, Mo	.....	.....	85	40	70	40	.....	62½	50
Fort Leavenworth, Kans	.....	.....	87½	40-50	60	40-50	.....	50-75	.....
Omaha, Nebr	.....	.....	75	35½	60	35	.....	75	35
District 6.									
Fort Sill, Okla	62½	35	87½	35	50	.....	.....	60	35
Fort Worth, Tex	68¾	30	87½	25	67½	25	.....	75	25
San Antonio, Tex	45	30	87½	30	62½	30-45	.....	62½	22
Leon Springs, Tex	50	31¼	87½	31¼	62½	31¼	.....	87½	31¼
Benbrook, Tex	68¾	30	87½	.....	67½	25	.....	75	.....
Dallas, Tex	60	40	87½	30	62½	30	.....	62½	30
Galveston, Tex	.....	.....	.....	.....	62½	25	.....	.....	25
Houston, Tex	53	.....	100	.....	62½	25	.....	75	.....
San Antonio, Tex	50	22	87½	40-50	62½	35	.....	62½	30
Districts 7, 8, and 9.									
Fort Worden, Wash	.....	.....	.....	.....	70	.....	.....	56¼	.....
Fort Stephens, Oreg	.....	.....	.....	.....	70	.....	.....	75	43¾
San Francisco, Cal	.....	.....	75	.....	75	.....	.....	81¼	56¼
San Pedro, Cal	65.[6]	50	75	50	62½	40	.....	68¾	56¼
San Diego, Cal	62½	37½	75	.....	62½	37½	.....	62½	40

[1] Rate per week.
[2] Rate per month.
[3] Housed free.
[4] Rate per week, with board.
[5] Sewer pipe.
[6] Rate per day.
[7] Hoisting.
[8] Gas.

TION WORK IN EFFECT MAY 1, 1918—Continued.

Cement workers.	Chauffeurs.	Electricians.	Electricians' helpers.	Electric linemen.	Electric linemen's helpers.	Electric wiremen.	Engineers.	Engineers, ditch machine.	Engineers, stationary.	Engineers, steam roller.
30	[1] $17.50-$25.00	60	30							
	37½	80	47½	80	37½	80		[2] $205.00		
30		54-56	30	56	30				59	59
		55								
[3] 30	[3] 30	[3] 56	[3] 30-40	[3] 56	[3] 30-40	56		[3] 60-62½	[3] 40-55	[3] 50
		60	30			37½				
	[1] $14.00-$25.00	56	30					50	[4] 36.00	60
25-30	40	53	31	50	30				53-58	53-58
40	[1] $25.00-$35.00	70	31½	65	37½			70	60	60
[3] 30		[3] 62½		[3] 50	[3] 30					
		87½	50							
	21⅞-36	59	31							
	[6] $2.00	62½-75	40	75						
22¾	19	45								40
24	31¼	50-60		60						
25		60	30	60	25	60				
	[1] $17.50-$25.00	62½	40					[1] $35.00		
25	[4] $21.00-$25.00	62½		50	20			65	[6] $4.50	[6] $4.50
30	37½	40-60	35-45	50	35-45	40-60		60	60	55
		60					[7] 50			60
35	[2] $80.00-$90.00	57	25-35							
45				75	53⅓	78¼	85	$1.25	$1.25	93¾
35	35	56¼	50	56¼	35	56¼			62½	62½
40										
		67½								
		72	55				[7] 50			
25	[6] $3.00	70	25	70	25	70				75
	50	70					[8] 65	75		75
45	[1] $25.00	70	45					75	55-75	55-75
30	[1] $21.00	65	30	65	30	65		75	60	62½
		60		60						
50	37½	75					[7] 87½			[2] $125.00
		75								
		78¾	40	70						
	[1] $20.00		45	75	28 1/10			75		75
25	[6] $2.50	[9] 68¾	38-45	[9] 50-68¾	38				67½	67½
20	[10] 30	68¾	25-35	68¾	25-35			75		75
31¼		68¾	31½	43¾	31¼		[2] $150.00			
	[6] $2.50	68¾	38½	75	38			67½		
30	[11] $4.50-$5.00	[12] 70	[12] 35	[12] 70	[12] 35			[12] 82½	62½	62½
25		62½	25							
	[1] $20.00	75		52½			62½	62½	62½	62½
30	30	68¾	30-35					82½		50
				62½		75			75	
43¾		72¼								
43¾										
42½	37½	65 9/10	45	65 9/10	45				56¼	62½
	37½	65½	37½							

[9] And $7 for board at one job.
[10] And $3 per day.
[11] Per day and $1 for board at one job.
[12] And $1 for board at one job.

WAGE RATES PER HOUR ON ARMY CONSTRUC

Locality.	Engineers, steam shovel.	Glaziers.	Hod carriers.	Laborers, common.	Machinists.	Masons.	Mechanics.	Painters.	Pipe layers.
NATIONAL ARMY AND NATIONAL GUARD CAMPS.									
Alexandria, La.				25		87½		50	35
Anniston, Ala.				25	75	60	50	40	40
Augusta, Ga.	[1] $35.00			22¾		62½		50	
Charlotte, N. C.		50	25	25	62½	60	62½	50	25
Deming, N. Mex.			25	25	62½	[2] 87½	62½	75	62½–87½
Fort Sill, Okla.		60	35	35	60	[3] 87½	60	60	35
Fort Worth, Tex.	62½	60	30	30		100		60	50
Greenville, S. C.				22–25					18–20
Hattiesburg, Miss.				17½		60–75			
Houston, Tex.				25					
Linda Vista, Cal.	60		[4] $4.50	40	60–75	75	60	[1] $4.00	45
Macon, Ga.				22½	75	60	50	50	35
Montgomery, Ala.	82½–100	40	25	25	60	62½	35–75	50	62½
Palo Alto, Cal.			56¼	37½				68¾	50
Spartanburg, S. C.			22½	25		50		25	25
Waco, Tex.			30	25				62½	35
American Lake, Wash.	84		56¼	50				75	62½
Admiral, Md.	80	50	50	30–35	47–55	75	55	60	35
Atlanta, Ga.		35		15–30			40–55		30–40
Ayer, Mass.	83½	62½	50	37½	50–75	75	50–75	62½	45
Battle Creek, Mich.	70	60	45	40	60	75	60	45	40
Chillicothe, Ohio			45	35				55	60
Columbia, S. C.			25	20					30
Des Moines, Iowa				45		86½	58	62½	52½
Fort Riley, Kans.	75	65	50	37½	65–75	85	50–75	65	60
San Antonio, Tex.	66⅔			20–25		87½		62½	31¼
Little Rock, Ark.	65		30	30			60	55	50
Louisville, Ky.	40	35 or 40	45	30	45	70	45–52	50–60	40
Petersburg, Va.	[5] $75.00		45	25–30	75	75	85	50–56	68¾
Rockford, Ill.	62½			45		75	[9] 62½	52½	55
Wrightstown, N. J.			40	35					38
Yaphank, Long Island, N. Y.	84¾			37½		70	60		50
									30
Black Point, Fla.		55	45	[10] 22½–25	70	75	75	60	
Tenally, N. J.	81¼	50		37½	62½	70		62½	43¼
OTHER CONSTRUCTION WORK.									
District 1.									
Boston, Mass.								62½	
New Britain, Conn.		45–65	40–50	35–40				40–55	
Saybrook, Conn.				40				60	
New York, N. Y.				40		70		62½	
Fox Hill, N. Y.	84⅓			37½	50		60	62½	50
Otisville, N. Y.				40		75		62½	
Rochester, N. Y.						70		50	
Mineola, L. I.				37½	[5] $40.00	75	62½	62½	62½
Brooklyn, N. Y.				37½	43¾				
Arverne, L. I.	75			37½					
Baldwinsville, N. Y.				40	55			60	
Buffalo, N. Y.				40	65			45	
Newark, N. J.	[5] $175.00		45	37½	75		75	62½	43¼
Bonhamtown, N. J.	84½			35	62½–75	70		70	
Colonia, N. J.		62½	42½	35		70		62½	
Holmdel, N. J.				40					
Woodbury, N. J.	[5] $33.00		45	35				60	43¼
Payonne, N. J.				37½					
Little Silver, N. J.				33		62½		43¾	
Philadelphia, Pa.	95¼	62½	45	35				62½	
Pittsburgh, Pa.		65		35		75		65	
Tarrytown, Pa.	[5] $42.00			35	72½				35
Delaware City, Del.		37½		40				37½	
Baltimore, Md.	70–80	30–50		35	50	75	50	50	50
Fort McHenry, Md.	70	56¼	56¼	35	65	75	[8] $30.00	56¼	60
Aberdeen, Md.	91		43¾	40	75	75	50	60	50
Curtis Bay, Md.	[5] $175.00			35	50	75	50	50	
Edgewood, Md.				40					
Fort Howard, Md.				35					
Washington, D. C.	70		37½–40	30–35–37½		75		62½	
Perryville, Md.	100			40			45–62½	62½	

[1] Rate per day.
[2] Brick masons.
[3] Stone masons.
[4] Roofers, metal, 62½ cents.
[5] And board.
[6] Roofers, metal, 70½ cents.
[7] Rate per month.
[8] Rate per week.
[9] Auto truck.

TION WORK IN EFFECT MAY 1, 1918—Continued.

Plasterers.	Plumbers.	Plumbers' helpers.	Riggers.	Roofers.	Sheet-metal workers.	Steam fitters.	Steam fitters' helpers.	Teamsters with teams (2-horse).	Trench machine operators.	Trench machine helpers.	Water boys.
80	75	22						75	70		15
62½	75	35		40	60			75	60		10-15
62½	75	25		45		50		[1] $6.50			15
60	62½	31¼		50	50	62½	31¼				10
75	87½	37½-62½		75		87½	37½-62½		75	62½	15
87½	75	35-44		[4] 55	62½	75	45	68¾	75	50	[1] $2.00
100	81¼	37½		67½	63¾	81¼	37½	62½	82½	50	15
50	30-45	18						60-70			12½-15
				30-40							
87½	75								62½	31¼	20-25
[1] $6.00	[5] 75	[5] 42½		45					60	50	32½
60	62½	40		50		62½	40	60			10
60	75	40		60	60	70	40	[1] $6.00	100	40	12½
87½	81¼			75					75	50	37½
55	62½	37½						55			17½
87½	75	33¾		25-62½		56		55			25
87½	87½	37½		62½	87½	81¼	62½				31¼
	68¾	35		62½	62½	62½	31¼	80	80	50	20
55-60	68¾	25-35									12½-15
75	80	37½		[6] 60	70½	80	50		83½	43¾	25
75	81¼	45		50	50	81¼	45	75	70	50	35
70	70	35		60	60	70	35	75			35
55	75	37½				75	37½	75			12½
87½	81¼	40		58	66½	81¼	40	85	[7] $160.00	46	20
85	75	37½		65		75	37½	70	60-75	37½	[1] $2.00
87½	87½	30		[4] 40	62½	53⅛	23⅛	62½	62½	31¼	10-15
81¼	75	35			65	75	35	80	75		20
70	67½	30		50	50	67½	30	70	50	35	20
	68¾	45				68¾	45	75		45	25
75	75	45		62½	65	75	45		36	24	25
65	72½	[8] $37.50			70	72½	37½	75			
75	75	25			62½	75	42½	120	75	37½	[1] $1.50
75	75	50		60	60	75	50	70			[1] $1.25
70	62½	43¾		[1] $4.50	56¼	62½	43¾	80	[8] $68.00		20
	75				62½						
60-75	50-65	35-50		45-60	50-65	50-65	40-50				20-30
	65	35		[11] 68¾		65	35				
75	75	25		40⅞	70						
75	75	37½	50	[11] 68¾	70	75	42½				20
	75	40				75	42½	87-100			[1] $2.50
	59⅜	25									
	[12] 100	37½		[13] 62½		[12] 100	[12] 67½		75-100	60	18¾
											15⅝
			50								
	68¾		67½			68¾					
											25
	75	43¾			75	75	42½				25
	62½				70				100		18¾
70	75	42½		62½	70	75	42½				25
					70						
	72½		62½	[13] 62½	75	72½				35-43	20
	75	37½				75	42½				
75	75	40		[14] 52½	62½	75	40	80			35
	75					75	43¾	80			
	75	50	60		70	75	50	80	[1] $42.00		20
56¼	70	50			60			75			
	68¾	30-35	45	62½	62½	50-62½	31¼-40	80	80	50	15
62½	68¾	35	65	62½	62½	67½	43		75	35	20
	75	43¾	40-62½			75	43¾				25-32
	68¾	30			62½	62½	31¼	80			15
	62½	31¼		50							
70	62½	31½-37½	62½	52½	62½	62½	37½				
	75	43¾				75	43¾				25

[10] First class.
[11] Slate and tile.
[12] Includes 25 cents per hour for board.
[13] Roofers, metal, $0.70.
[14] Slag roofers.

WAGE RATES PER HOUR ON ARMY CONSTRUC

Locality.	Engineers, steam shovel.	Glaziers.	Hod carriers.	Laborers, common.	Machinists.	Masons.	Mechanics.	Painters.	Pipe layers.
OTHER CONSTRUCTION WORK—concluded.									
District 2.									
Fig Point, Va	[1]$175.00		30	30			45		
Belvoir, Va	[1]$175.00	62½	37½	35	62½	70	62½	72½	50
Norfolk, Va			36	30	59	75		45	
Saltville, Va				35			50		40
Newport News, Va	[2] 75		[3]40–45	[3] 30	40–60	75	80–85	45	
Fort Monroe, Va				30					
Morrison, Va	[5] 36.00			30			50	45	60
Hampton, Va	53–58		40	25–30	53	75	53–58	53	
Charleston, W. Va	70		37½	30–37½	60–70			55	50
Azalea, N. C									
Fort Caswell, N. C				[3] 30					
Fort Moultrie, S. C				25					25
Charleston, S. C			28	25	59	55			
Charleston, S. C			18¾	[6]$2.50–$3.50	50	45		51	
Atlanta, Ga	50			25	50				[7] 30–40
Augusta, Ga	40			22¾		50			
Pensacola, Fla				24				40–48	
Fort Dade, Fla				25	60			50	30
Arcadia, Fla				20				60	20
Arcadia, Fla	[6]$4.50	50	20	20	50	70	50	50	30
District 3.									
Dayton, Ohio	60	55	50	30–35		80		55	40
Jeffersonville, Ind			45	30		75		60	
Indianapolis, Ind				35				55	45
Chicago, Ill	93¾	72½	45			75		72½	
Chicago, Ill									
Rantaul, Ill	100	55	45	35	62½	82½		55	50
Belleville, Ill				35				50	60
Mount Clemens, Mich				35	50			60	
District 4.									
Nashville Tenn	84			30				50	
Montgomery, Ala				25				50	50
Pike Road, Ala				25				50	
Mobile, Ala				25–37½					40–60
West Point, Miss				25			65	50	
Lonoke, Ark		60	30	30		87½	50–60	60	50
District 5.									
Fort Des Moines, Iowa		50	40					57½	50
St. Louis, Mo			[10]55–62		75			62½	
Fort Leavenworth, Kans				35					
Omaha, Nebr				35					40
District 6.									
Fort Sill, Okla	75			35	60			60	
Fort Worth, Tex			25	25–30				56¼	
San Antonio, Tex	75			20–22			75	62½	30
Leon Springs, Tex				31¼					
Benbrook, Tex				25				56¼–60	
Dallas, Tex				30		87½	62½	60	35–45
Galveston, Tex				25					
Houston, Tex	62½	60		25		100		60	
San Antonio, Tex				22				62½	40–50
Districts 7, 8, and 9.									
Fort Worden, Wash				43¾				48¾	
Fort Stephens, Oreg				43¾				56¼	62½
San Francisco, Cal				43¾				68¾	
San Pedro, Cal				40				56¼	60
San Diego, Cal				37½				62½	[12] 43¾

[1] Rate per month. [2] Housed free. [5] Rate per week, with board.
[3] Metal, 62½ cents. [4] Rate per week. [6] Rate per day.

TION WORK IN EFFECT MAY 1, 1918—Concluded.

Plasterers.	Plumbers.	Plumbers' helpers.	Riggers.	Roofers.	Sheet-metal workers.	Steam fitters.	Steam fitters' helpers.	Teamsters with teams (2-horse).	Trench machine operators.	Trench machine helpers.	Water boys.
	62½	30				62½	30				15
68¾	72½	47½		(2)	72½	72½			[1] $205.00	35	20
70	62½	30			53	62½	37½	80			16
			50								
60–75	62½	28		55	53	50–62½	37½		60–62½	40–45	[4] $14.00
	60	30									
	62½	35			53	60	35		[4] $50.00		25
	58–62½	30–35				50	30–35				16⅔
75	75	37½		55	70	75	42½		70	42½	25
	75	37½				75	37½				
[3] 53	[3] 62½	[3] 30			[3] 62½						[3] 16½
											[4] $5.00
60	59			46	59	59	31				18
45											
60	68¾	37½				62½					15
											10
	80	24									20
	75	30									18¾
	72½	40		50		72½	40				[3] 18¾
	70	35		50	65	50	30–40		65	40	[8] 10
	62½	33½		60		62½	33⅓		60		30
								87½			
	77½	35				77½	39				35
75	75			[9] 67½	70		45				30
81¼						75					
87½	69	40		65	65	69	40	70			20
	75	45				75	45				
	75	37½			65	75	37½	70			
70	72	35			50			78	75		15
	75	40				75	40	75			
	75	40		50					75	50	25
	62½	36–54									
	81¼	45		55	60	81¼	45		50		
	75	35		60	62½–70	87½	35		75	30	15
87½	81¼	40				81¼	40	75			
87½	75	46 8/16		75	65	75	43¾				18¾
	75							75			
	85							70			35
	75	45		60	60		43¾				25
87½	81¼	30		67½		81¼	30–37½				15–18¾
87½	75–87½	30–40		62½	62½	50	25–30		75		15–20
	87½	37½									31¼
87½	81¼	30		67½	68¾	81¼	30		50	30	15
87½	81¼–87½	30		30–40		81¼	30		82½	50	20
	81¼	25									20
	87½	30			75	87½	30				25
87½	75	50		62½	62½				82½	35	15–20
	81¼	43¾			[11] 75						31¼
	81¼				87½						
	81¼			81¼							
	68¾	43¾		56¼	81¼	65 5/16	47				
	75	40		50							25

[7] Pipe layers and sewer men.
[8] And board.
[9] Metal, 70 cents.
[10] Brick and plaster.
[11] Plus expenses.
[12] Sewer.

WAGES OF FARM LABOR IN THE UNITED STATES.

A comparison of the prevailing wages of male farm labor in the various States in 1910 and 1917 is given in the March, 1918, number of the Monthly Crop Report of the United States Bureau of Crop Estimates.

Wage rates per month in hiring by the month or season with board in 1917 ranged from $21.88 in the South Central States to $36.23 in the North Central States west of the Mississippi River and $44.25 in the Western and Pacific, with a national average of $28.87. Without board the monthly rate for the United States was $40.43, with a range from $30.80 in the South Atlantic States to $49.46 in the West North Central and $63.59 in the Western and Pacific. Harvest wages with board were as high as $2.77 per day in the West North Central States and as low as $1.55 in the South Atlantic, while the United States average was $2.08. The rates without board were 35 to 59 cents higher in the various sections.

Outside of harvest, day rates of wages with board ranged from $1.17 in the South Atlantic States to $1.91 in the North Atlantic and $2.03 in the West North Central, and the United States average was $1.56. Without board the rates were 35 to 95 cents higher.

As a general average for the whole country, the increase in the rate of wages per month with board in 1917 over 1916 was 24.2 per cent. The increase over 1910 was 50.3 per cent. In the average rate of wages for harvest labor with board the increase in 1917 over 1916 was 23.1 per cent; without board, 22.7 per cent. For day labor, outside of harvest, farmers paid 23.8 per cent more with board and 24.7 per cent more without board. The general fact is that the rates of wages for farm labor increased almost one-quarter in one year and about two-fifths to one-half in seven years.

The lowest relative advance in rate of wages from 1916 to 1917, 12 per cent is found in the Western and Pacific States in hiring by the day with board for work outside of harvest; and the highest, 36.1 per cent, in the South Atlantic in hiring by the month with board.

The South experienced the greatest effects of the increase of farm wages in 1917 over 1916, expressed as a percentage of increase, but the greatest effects in terms of absolute increase in dollars and cents were felt in the other great groups of States, most of all in the Western and Pacific, next below in the North Central, and third in order in the North Atlantic group. The largest absolute increase in wages in the South was in the South Atlantic States in hiring by the month or season with board. Monthly wage rates increased absolutely in the average for the United States by $5.33 in seasonal or yearly contracts when without board, and $5.62 when with board. Day wage rates increased by 30 to 47 cents in the several varieties of contracts.

The following is a statement of the detailed wage data for the years 1910 and 1917.

WAGES OF MALE FARM LABOR.

State and division.	Per month.				Per day at harvest.				Per day other than harvest.			
	With board.		Without board.		With board.		Without board.		With board.		Without board.	
	1917	1910	1917	1910	1917	1910	1917	1910	1917	1910	1917	1910
Maine	$36.00	$23.50	$53.00	$34.50	$2.39	$1.50	$2.88	$1.95	$2.02	$1.23	$2.56	$1.60
New Hampshire	35.00	23.50	51.00	35.50	2.28	1.35	2.86	1.84	1.92	1.18	2.50	1.65
Vermont	35.00	25.00	50.00	35.50	2.40	1.75	3.00	2.25	1.98	1.21	2.45	1.60
Massachusetts	38.00	22.75	58.00	37.20	2.10	1.42	2.85	1.92	2.00	1.22	2.55	1.66
Rhode Island	31.00	21.00	48.00	34.00	2.00	1.35	2.90	2.05	1.90	1.12	2.45	1.56
Connecticut	35.00	21.00	52.00	36.00	2.21	1.55	2.85	2.00	1.85	1.07	2.50	1.55
New York	35.00	23.50	48.00	35.00	2.52	1.80	3.04	2.22	1.94	1.28	2.47	1.66
New Jersey	32.00	19.50	46.00	31.50	2.45	1.70	2.81	2.15	1.95	1.11	2.40	1.46
Pennsylvania	30.00	18.75	45.00	29.00	2.29	1.50	2.80	1.96	1.80	1.04	2.35	1.49
North Atlantic	33.26	21.65	48.06	33.19	2.39	1.63	2.89	2.08	1.91	1.17	2.43	1.58
Delaware	29.00	16.00	43.00	24.75	2.31	1.35	2.80	1.55	1.75	.98	2.16	1.22
Maryland	24.00	13.50	37.00	21.50	2.17	1.26	2.59	1.64	1.52	.88	2.00	1.18
Virginia	22.00	14.00	32.00	19.50	1.75	1.15	2.20	1.44	1.25	.78	1.65	1.01
West Virginia	31.00	19.40	45.00	29.00	2.00	1.28	2.50	1.65	1.55	.94	2.06	1.27
North Carolina	25.00	13.60	30.60	19.50	1.60	1.03	1.95	1.28	1.18	.73	1.50	.97
South Carolina	18.00	12.00	25.00	16.50	1.20	.96	1.45	1.12	.93	.70	1.16	.90
Georgia	19.00	13.00	26.00	18.00	1.24	.98	1.52	1.23	1.00	.73	1.31	.95
Florida	22.00	15.00	33.00	25.00	1.25	1.10	1.68	1.46	1.14	.96	1.55	1.32
South Atlantic	22.44	13.77	30.80	19.75	1.55	1.07	1.90	1.33	1.17	.77	1.52	1.01
Ohio	31.00	21.00	43.00	29.00	2.45	1.67	2.95	2.07	1.88	1.29	2.37	1.57
Indiana	29.00	20.50	41.00	28.40	2.30	1.70	2.80	2.07	1.65	1.14	2.10	1.45
Illinois	33.00	24.50	44.00	32.90	2.60	1.90	3.15	2.30	1.85	1.31	2.32	1.63
Michigan	34.00	23.00	47.00	33.00	2.56	1.64	3.10	2.10	1.97	1.22	2.50	1.66
Wisconsin	36.00	26.00	52.00	37.25	2.40	1.76	2.98	2.20	2.00	1.35	2.52	1.78
North Central east of Mississippi River	32.44	22.94	44.98	31.81	2.48	1.75	3.01	2.13	1.86	1.24	2.35	1.61
Minnesota	39.00	26.00	54.00	38.00	2.96	2.23	3.53	2.65	2.17	1.48	2.77	1.90
Iowa	41.00	28.00	53.00	39.00	2.83	2.12	3.30	2.51	2.23	1.57	2.76	1.98
Missouri	29.00	21.50	39.00	29.50	2.12	1.55	2.55	1.93	1.44	1.02	1.82	1.32
North Dakota	41.00	29.00	60.00	42.00	3.40	2.40	4.35	3.03	2.45	1.60	3.30	2.20
South Dakota	42.00	27.00	61.00	39.00	3.30	2.35	4.00	2.95	2.52	1.54	3.15	2.00
Nebraska	39.00	26.50	53.00	38.00	3.10	2.14	3.77	2.60	2.31	1.57	2.95	1.96
Kansas	33.00	24.00	46.00	34.00	2.90	2.18	3.40	2.57	2.00	1.42	2.50	1.84
North Central west of Mississippi River	36.23	25.10	49.46	35.45	2.77	2.01	3.32	2.43	2.03	1.38	2.57	1.77
Kentucky	24.00	16.00	33.00	23.10	1.84	1.36	2.25	1.71	1.20	.85	1.59	1.12
Tennessee	21.00	14.00	29.00	20.00	1.49	1.14	1.85	1.44	1.02	.77	1.35	1.02
Alabama	16.00	13.00	24.00	18.50	1.13	.98	1.45	1.26	1.00	.85	1.26	1.05
Mississippi	17.00	13.30	24.00	19.50	1.13	.93	1.42	1.22	.95	.83	1.27	1.10
Louisiana	19.00	13.50	30.00	20.25	1.20	.90	1.51	1.25	1.11	.77	1.39	1.02
Texas	25.00	18.00	35.00	24.50	1.67	1.22	2.05	1.57	1.28	1.04	1.65	1.32
Oklahoma	28.00	19.10	40.00	28.10	2.40	1.60	2.86	1.97	1.65	1.11	2.10	1.47
Arkansas	23.00	16.25	32.00	24.00	1.65	1.20	2.02	1.55	1.20	.90	1.58	1.20
South Central	21.88	15.28	31.07	21.90	1.57	1.14	1.94	1.47	1.18	.89	1.53	1.15
Montana	46.00	38.00	70.00	50.00	3.00	2.05	3.79	2.80	2.44	1.77	3.30	2.36
Wyoming	45.00	35.00	68.00	49.00	2.64	1.90	3.57	2.50	2.15	1.73	3.17	2.29
Colorado	41.00	29.50	60.00	44.50	2.64	1.95	3.38	2.47	2.15	1.47	2.79	2.00
New Mexico	32.00	24.50	48.00	34.25	1.80	1.46	2.20	1.88	1.55	1.12	1.97	1.58
Arizona	48.00	30.00	68.00	40.00	2.40	1.72	3.10	2.24	2.22	1.34	2.83	2.04
Utah	50.00	35.00	68.00	47.50	2.73	1.78	3.25	2.20	2.42	1.55	3.00	2.00
Nevada	50.00	37.00	72.00	54.00	2.65	1.82	3.25	2.38	2.25	1.39	3.00	1.96
Idaho	51.00	35.00	70.00	49.50	3.12	2.20	3.80	2.80	2.48	1.70	3.20	2.27
Washington	47.00	33.00	66.00	50.00	3.00	2.42	3.60	2.78	2.40	1.72	3.10	2.26
Oregon	44.00	32.00	61.00	44.50	2.72	2.12	3.30	2.60	2.15	1.51	2.80	2.07
California	43.00	33.00	63.00	47.00	2.56	1.98	3.15	2.48	2.04	1.44	2.67	2.02
Far Western	44.25	32.69	63.59	46.48	2.69	2.02	3.28	2.52	1.87	1.51	2.82	2.06
United States	28.87	19.21	40.43	27.50	2.08	1.45	2.54	1.82	1.56	1.06	2.02	1.38

EARNINGS IN THE MANUFACTURING INDUSTRIES OF NEW YORK STATE.

The Bureau of Statistics and Information of the New York Department of Labor has recently published very comprehensive data regarding the average weekly earnings of labor in the factories of New York State for the years 1915, 1916, 1917, and 1918. The figures given are reproduced in the following table for the State as a whole, and at the bottom of the table are shown the average weekly earnings in New York City factories and comparative figures for factories outside New York City.

AVERAGE WEEKLY EARNINGS IN MARCH IN REPRESENTATIVE FACTORIES OF NEW YORK STATE (INCLUDES ALL EMPLOYEES IN BOTH OFFICE AND SHOP).

Industry.	Average weekly earnings in March—			
	1918	1917	1916	1915
Stone, clay, and glass products	$18.79	$16.49	$13.76	$13.10
Miscellaneous stone and mineral products	20.26	18.96	15.75	16.98
Lime, cement, and plaster	19.65	16.41	13.26	12.54
Brick, tile, and pottery	16.85	13.49	12.01	11.34
Glass	18.13	16.19	13.72	13.19
Metals, machinery, and conveyances	21.74	18.07	16.00	14.57
Gold, silver, and precious stones	19.68	18.11	15.85	14.26
Brass, copper, aluminum, etc	19.23	16.79	14.09	14.09
Pig iron and rolling mill products	27.95	23.53	18.93	15.87
Structural and architectural ironwork	21.25	19.39	16.29	14.52
Sheet metal work and hardware	17.93	14.94	13.28	13.15
Firearms, tools, and cutlery	21.73	17.22	16.35	14.65
Cooking, heating, and ventilating apparatus	22.47	18.18	15.29	14.36
Machinery (including electrical apparatus)	21.05	17.43	15.80	13.89
Automobiles, carriages, and aeroplanes [1]	23.01	19.54	17.08	18.00
Cars, locomotives, and railway repair shops	23.57	18.74	16.47	14.24
Boat and ship building	24.37	20.97	22.19	18.75
Instruments and appliances	18.15	16.04	15.16	14.06
Wood manufactures	16.77	14.80	13.12	12.38
Sawmill and planing mill products	16.48	14.48	13.21	12.39
Furniture and cabinet work	17.51	14.86	13.21	13.08
Pianos, organs, and other musical instruments	17.26	16.78	14.93	13.21
Miscellaneous wood and allied products	15.58	12.80	11.10	10.65
Furs, leather, and rubber goods	17.13	14.88	12.89	11.73
Leather	17.07	14.93	12.03	10.59
Furs and fur goods	21.87	17.27	13.66	11.34
Boots and shoes	17.63	15.48	13.72	12.38
Miscellaneous leather and canvas goods	15.81	13.47	11.97	11.66
Rubber and gutta-percha goods	16.34	14.42	12.10	11.29
Pearl, horn, bone, celluloid, hair, etc	14.58	12.44	10.49	9.59
Chemicals, oils, paints, etc	18.60	16.19	14.04	13.56
Drugs and chemicals	17.13	15.61	13.89	13.12
Paints, dyes, and colors	17.72	15.28	14.68	14.85
Animal and mineral oil products	19.61	16.39	13.81	12.96
Miscellaneous chemical products	18.46	16.68	14.40	14.22
Paper	19.69	15.74	14.64	13.30
Printing and paper goods	18.67	16.47	15.71	14.61
Paper boxes and tubes	13.64	12.12	11.11	10.69
Miscellaneous paper goods	14.74	13.16	12.38	12.07
Printing and book making	20.46	18.04	17.33	16.22
Textiles	14.60	12.13	10.58	9.69
Silk and silk goods	12.83	11.37	10.34	9.47
Wool manufactures	15.67	12.77	11.12	10.26
Cotton goods	15.34	12.80	10.64	9.96
Cotton and woolen hosiery and knit goods	14.07	11.38	9.98	9.19
Other textiles and allied products	15.64	12.80	11.04	9.81
Clothing, millinery, laundering, etc	16.01	14.02	12.48	11.11
Men's clothing	16.60	14.60	12.65	11.12
Men's shirts and furnishings	12.50	11.27	9.91	8.69

AVERAGE WEEKLY EARNINGS IN MARCH IN REPRESENTATIVE FACTORIES OF NEW YORK STATE (INCLUDES ALL EMPLOYEES IN BOTH OFFICE AND SHOP)—Concl'd.

Industry.	Average weekly earnings in March—			
	1918	1917	1916	1915
Clothing, millinery, laundering, etc—Concluded.				
Women's clothing	$22.37	$19.44	$17.25	$16.32
Women's underwear and furnishings	12.72	11.26	10.07	9.36
Women's headwear	19.99	15.91	13.46	12.40
Miscellaneous sewing	9.98	9.35	9.14	8.68
Laundering, cleaning, dyeing, etc	12.31	10.56	9.45	9.15
Food, liquors, and tobacco	15.87	14.16	12.70	11.77
Flour, feed, and other cereal products	20.42	17.33	15.56	15.04
Fruit and vegetable canning and preserving	15.05	12.50	11.49	10.06
Groceries not elsewhere classified	18.21	16.00	14.29	12.88
Slaughtering, meat packing, and dairy products	19.57	16.68	15.13	13.72
Bread and other bakery products	15.02	13.44	12.31	11.58
Confectionery and ice cream	11.23	10.85	9.82	9.74
Beverages	22.04	20.01	19.24	18.80
Cigars and other tobacco products	13.12	11.54	9.58	8.53
Water, light, and power	20.41	18.28	17.11	15.20
Total, all factories in State	18.71	15.79	13.96	12.65
Factories in New York City	17.91	15.68	14.20	12.99
Factories outside New York City	19.14	15.85	13.82	12.43

[1] Factories manufacturing airplane engines only are classified with "machinery."

The chart on page 126, taken from the source just referred to, shows graphically the course of average weekly earnings in New York factories from June, 1914, to March, 1918, in comparison with the course of retail prices of food in the United States. The information on which the chart is based is as follows:

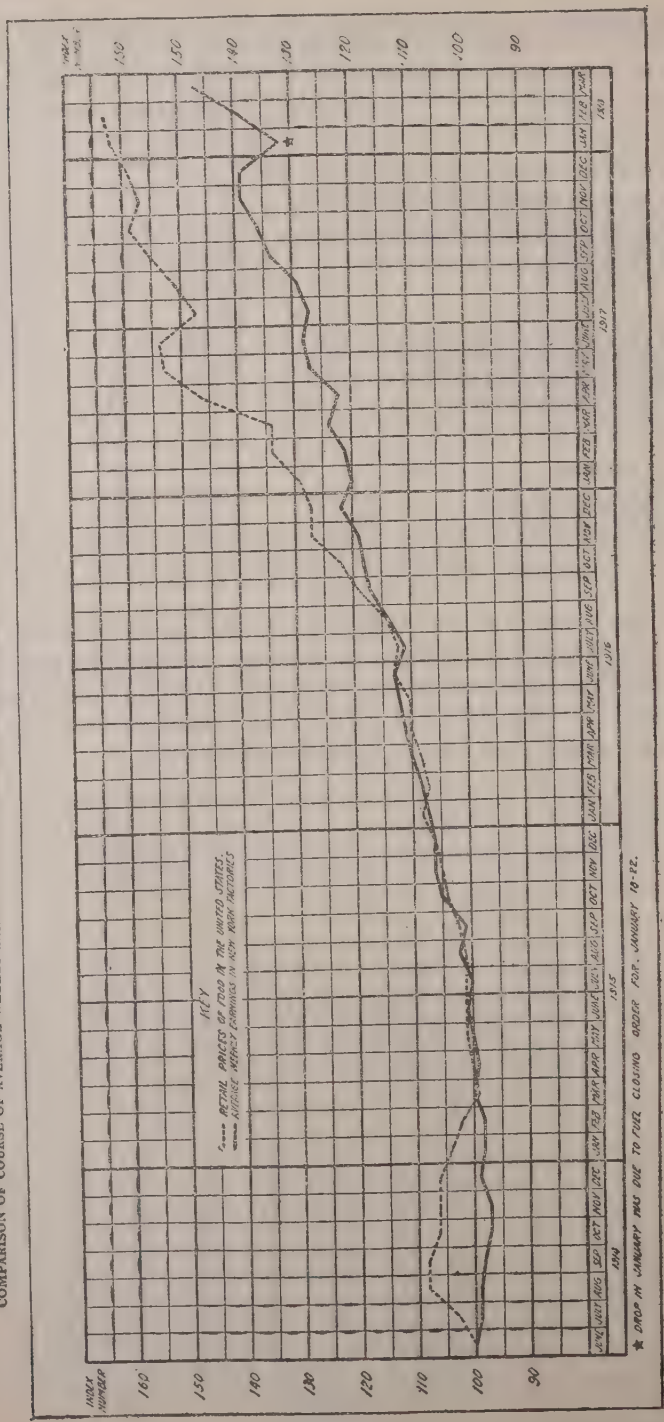
COMPARATIVE INDEX NUMBERS OF AVERAGE WEEKLY EARNINGS IN NEW YORK STATE FACTORIES AND OF RETAIL FOOD PRICES IN THE UNITED STATES.

[The figures are indexes, with June, 1914, as 100. Those for prices are derived from the relative prices published by the United States Bureau of Labor Statistics.]

Month.	1914		1915		1916		1917		1918	
	Average weekly earnings, New York factories.	Retail food prices—United States.	Average weekly earnings, New York factories.	Retail food prices—United States.	Average weekly earnings, New York factories.	Retail food prices—United States.	Average weekly earnings, New York factories.	Retail food prices—United States.	Average weekly earnings, New York factories.	Retail food prices—United States.
January	.....	.....	98	104	107	108	120	129	132	162
February	.....	.....	98	102	108	107	121	134	139	163
March	.....	.....	100	99	110	108	124	134	147	[1] 156
April	.....	.....	99	100	111	110	122	146	.....	.....
May	.....	.....	100	101	112	110	127	153	.....	.....
June	100	100	101	101	113	113	128	154	.....	.....
July	99	103	100	101	111	112	127	147	.....	.....
August	99	108	102	101	114	114	129	151	.....	.....
September	98	108	101	102	117	119	134	155	.....	.....
October	97	106	105	104	118	122	136	159	.....	.....
November	97	106	106	105	119	127	139	157	.....	.....
December	99	106	106	106	122	127	139	159	.....	.....
Average for year	98	105	101	102	114	115	129	147	.....	.....

[1] This figure is supplied by the U. S. Bureau of Labor Statistics.

COMPARISON OF COURSE OF AVERAGE WEEKLY EARNINGS IN NEW YORK STATE FACTORIES WITH COURSE OF RETAIL FOOD PRICES IN THE UNITED STATES



RATES OF WAGES PAID TO WORKERS PLACED BY EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918.

In the table which follows are given the rates of wages paid to workers placed in employment by employment offices in the United States on the last day of April, 1918, or the date nearest the last day in April on which workers were placed, in 33 selected occupations. In a few instances no report was received for April. In such cases the figures for the preceding month were used. Data are presented for 151 employment offices, comprising 44 Federal employment offices, 11 Federal-municipal employment offices, 11 Federal-State employment offices, 3 Federal-State-municipal employment offices, 1 Federal-State-county-municipal employment office, 8 municipal employment offices, 1 municipal-private employment office, 46 State employment offices, 1 State-county-municipal employment office, and 25 State-municipal employment offices in 41 States and the District of Columbia.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT

(Fed.=Federal; Sta.=State; Co.=County; Mun.=Municipal;

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Alabama:					
Mobile (Fed.)				$0.50 h.	
Arizona:					
Phoenix (Fed.)	$5.50 d.	$5.60 d.		6.00 d.	$0.35 h.
Arkansas:					
Little Rock (Fed.)	.50 h.	.52 h.	$0.75 h.	.60 h.	1.50 d.
California:					
Los Angeles (Fed.-Sta.-Mun.)	4.50 d.	5.25 d.	6.00 d.	5.00 d.	.30 h.
Sacramento (Fed.-Sta.)	$4.00–5.00 d.	.54 h.	7.00 d.	5.50 d.	.30 h.
San Diego (Fed.)	4.50 d.			5.00 d.	.30 h.
San Francisco (Fed.)	5.80 d.	5.80 d.		6.60 d.	$45.00–60.00 m.
Santa Barbara (Fed.)				4.50 d.	
Colorado:					
Colorado Springs (Sta.)	4.00 d.			3.25 d.	.25 h.
Denver No. 1 (Fed.)			7.00 d.		2.00 d.
Denver No. 2 (Sta.)	4.65 d.			.52½ h.	2.60 d.
Pueblo (Sta.)	4.00 d.	.55 h.		.52½ h.	.25 h.
Connecticut:					
Bridgeport (Fed.-Sta.)				.60 h.	.25–.30 h.
Hartford (Sta.)				.35 h.	.25 h.
New Haven (Sta.)				4.00 d.	.25 h.
Norwich (Sta.)					2.00 d.
Waterbury (Sta.)					.25 h.
Delaware:					
Wilmington (Fed.)	.72½ h.	.72½ h.		.62½ h.	
District of Columbia:					
Washington (Fed.)	.62½ h.	.62½ h.	.75 h.	.62½ h.	1.25 d.
Florida:					
Jacksonville (Fed.)				$0.55–.62½ h.	
Miami (Fed.)					
Tampa (Fed.)				.55 h.	
Georgia:					
Atlanta (Fed.-Sta.)	.60 h.	.60 h.	.75 h.	.50–.65 h.	
Savannah (Fed.)	.51 h.	.53 h.	5.00 d.	4.00 d.	1.00 d.
Idaho:					
Boise (Mun.)	5.00 d.			.62½ h.	.35 h.
Moscow (Fed.)	5.00 d.	5.28 d.	6.00 d.	5.28 d.	2.00 d.
Illinois:					
Chicago (Fed.)	.60 h.	.75 h.		.55 h.	8.00–12.00 w.
Chicago (Sta.)	.45 h.	.48 h.	.50 h.	.45–.60 h.	2.10–2.60 d.
East St. Louis (Sta.)	.48 h.	.50 h.	.87½ h.	.70 h.	.15 h.
Peoria (Sta.)					2.10 d.
Rockford (Sta.)	.45–.50 h.	.45 h.	.75 h.	.62½ h.	.25 h.
Rock Island-Moline (Sta.)	.65 h.	$0.52–.75 h.	.75 h.	.62½ h.	.25 h.
Springfield (Sta.)	.65 h.	.50–.65 h.	.65 h.	.55 h.	1.50–2.00 d.
Indiana:					
Evansville (Sta.)					1.50 d.
Fort Wayne (Sta.)	.45 h.	.52 h.	.70 h.	.50 h.	.20 h.
Indianapolis (Fed.)				.45 h.	6.00 w.
Indianapolis (Sta.)				.55 h.	1.50 d.
South Bend (Sta.)					2.00 d.
Terre Haute (Sta.)	.65 h.			.60 h.	7.00 w.
Iowa:					
Des Moines (Fed.-Sta.)					
Davenport (Fed.-Sta.)					2.00 d.
Kansas:					
Topeka (Fed.-Sta.)	.48 h.	.52 h.	.87½ h.	.65 h.	.25 h.
Kentucky:					
Louisville (Sta.)			.75 h.	.40–.55 h.	
Louisville (Mun.-Pri.)				.50 h.	8.00 w.
Louisiana:					
New Orleans (Fed.-Sta.-Mun.)	4.50 d.	.45 h.	.70 h.	.55 h.	1.00 d.
Maryland:					
Baltimore (Fed.)	.50–.72½ h.	.52–.75 h.		.62½ h.	42.00 m.
Massachusetts:					
Boston (Fed.)	1.35 h.	.70 h.		.70 h.	6.00–8.00 w.
Boston (Sta.)	.50 h.	.60 h.	.55 h.	.55 h.	.20–.35 h.
Springfield	.47–.60 h.	.60 h.		.60 h.	8.00–10.00 w.
Worcester (Sta.)	.40–.45 h.			3.50 d.	10.00 w.

[1] And board. [2] And found.

BY EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918.

Pri.=Private; h.=Hour; d.=Day; w.=Week; m.=Month; y.Year.)

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
.....	.....	.....	.....	.....	.....
$4.00 d.	$75.00 m.	$3.00 d.	.....	$60.00 m.	.....
85.00 m.	5.00 w.	3.00 d.	.....	40.00 m.	$0.30 h.
21.00 w.	45.00 m.	3.00 d.	.....	[1] 2.00 d.	5.00 d.
$60.00–120.00 m.	.....	3.50 d.	$0.27½–$0.40 h.	$2.00– 3.00 d.	5.00 d.
50.00– 90.00 m.	$40.00 –60.00 m.	3.00 d.	.....	40.00–55.00 m.	.....
95.00 m.	30.00 m.	4.00 d.	.70 h.	[1] 2.25 d.	.....
.....	.....	[2] 45.00 m.	.....	.....	.....
17.50 w.	40.00 m.	3.00 d.	.....	45.00 m.	.....
50.00 m.	40.00 m.	3.00 d.	.....	50.00 m.	.....
[3] 75.00 m.	[3] 40.00 m.	3.50 d.	.....	50.00 m.	.....
70.00 m.	12.00 w.	3.00 d.	.....	40.00 m.	.....
18.00– 21.00 w.	30.00–35.00 m.	$15.00–18.00 w.	.35 h.	40.00–50.00 m.	.....
8.00– 14.00 w.	.....	35.00–40.00 m.	.....	35.00–40.00 m.	.....
14.00– 15.00 w.	7.00–12.00 w.	15.00–21.00 w.	.....	30.00–45.00 m.	.....
.....	[1] 35.00 m.	3.00 d.	.....	42.00–50.00 m.	.....
50.00 m.	30.00 m.	.....	.....	30.00 m.	.....
55.00 m.	8.00 w.	.....	.....	35.00–45.00 m.	.....
50.00 m.	30.00–35.00 m.	15.00 w.	.25 h.	40.00 m.	.50 h.
60.00 m.	.....	2.50 d.	.....	2.00 d.	.....
.....	.....	.....	.....	2.00 d.	.....
90.00–110.00 m.	.....	.....	40.00 m.	.....	.....
20.00 w.	5.00 w.	15.00 w.	.....	25.00–35.00 m.	.30 h.
1.50 d.	1.00 d.	1.75 d.	2.50 d.	1.50 d.	1.75 d.
75.00–100.00 m.	70.00 m.	3.50 d.	.....	[1] 2.50 d.	.....
75.00 m.	40.00 m.	75.00 m.	.....	60.00 m.	3.50 d.
.....	9.00–15.00 w.	.....	.....	35.00–50.00 m.	.....
[3] 50.00–100.00 m.	[4] 50.00–75.00 m.	3.00– 4.00 d.	.35 h.	[3] 35.00–50.00 m.	.50 h.
10.00 w.	6.00 w.	3.00 d.	3.00 d.	35.00 m.	.50 h.
12.00 w.	8.00 w.	2.75 d.	.....	45.00 m.	.45 h.
12.00– 15.00 w.	10.00 –12.00 w.	35.00–40.00 m.	.....	45.00–60.00 m.	$0.45– .50 h.
18.00– 25.00 w.	10.00 w.	3.00– 3.25 d.	6.00 d.	45.00–60.00 m.	.42½ h.
8.00– 20.00 w.	7.00 w.	3.25 d.	.....	35.00–50.00 m.	.50 h.
1.50 d.	6.00 w.	2.25 d.	.....	35.00 m.	.....
.....	10.00 w.	18.00 w.	.....	30.00–35.00 m.	.45 h.
.....	12.00 w.	.25 h.	.....	35.00 m.	.....
60.00– 80.00 m.	8.00 –10.00 w.	3.00 d.	.....	30.00–50.00 m.	.....
.....	.....	16.00 w.	.....	30.00 m.	.....
40.00 m.	.....	18.00 w.	.....	35.00–45.00 m.	.....
.....	.....	.....	.....	50.00 m.	.....
20.00 w.	.....	3.25 d.	.....	45.00–50.00 m.	.....
60.00– 90.00 m.	30.00–40.00 m.	.28 h.	.....	40.00–60.00 m.	.40– .45 h.
.....	5.00 w.	.....	.....	15.00–50.00 m.	.....
10.00 w.	6.00 w.	2.00 d.	.....	[1] 6.00 w.	.....
[1] 60.00 m.	[3] 25.00 m.	2.00 d.	.30 h.	[3] 25.00 m.	2.00 d.
[2] 25.00– 60.00 m.	50.00 m.	.....	.....	25.00–45.00 m.	.....
.....	10.00 w.	18.00 w.	.30 h.	40.00–50.00 m.	.....
[1] 15.00 w.	8.00–25.00 w.	3.00 d.	3.00 d.	[3] 40.00 m.	4.00 d.
.....	12.00–20.00 w.	15.00–18.00 w.	.....	35.00–40.00 m.	.....
[1] 14.00 w.	.....	3.00 d.	.....	[3] 40.00 m.	.....

[3] And board and room. [4] And room, board and laundry.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operators, male.	Laundry operators, female.
Alabama:					
Mobile (Fed.)			$0.25 h.		
Arizona:					
Phoenix (Fed.)	$40.00 m.		3.00 d.	$30.00 w.	
Arkansas:					
Little Rock (Fed.)	5.00 w.	$0.75 h.	.30 h.		$8.00 w.
California:					
Los Angeles (Fed.-Sta.-Mun.)	[1] 32.50 m.	4.00 d.	$3.00-3.50 d.	18.00 w.	$8.00-10.00 w.
Sacramento (Fed.-Sta.)		6.00 d.	3.00-3.50 d.		
San Diego (Fed.)	$20.00-40.00 m.		3.00 d.	15.00 w.	9.00 w.
San Francisco (Fed.)	25.00-50.00 m.	5.84 d.	3.00-3.60 d.		9.00-18.00 w.
Santa Barbara (Fed.)			3.25 d.		
Colorado:					
Colorado Springs (Sta.)	35.00 m.		.35 h.		
Denver No. 1 (Sta.)			3.00 d.		
Denver No. 2 (Sta.)	35.00 m.		.40 h.	3.00 d.	
Pueblo (Sta.)	25.00 m.		.30 h.		
Connecticut:					
Bridgeport (Fed.-Sta.)	3.50-10.00 w.		.35-.40 h.	.35 h.	.30 h.
Hartford (Sta.)	6.00-8.00 w.	.60 h.	.30-.40 h.		
New Haven (Sta.)	5.00-8.00 w.		2.50-3.50 d.	15.00 w.	
Norwich (Sta.)	[2] 30.00 m.		3.00 d.		
Waterbury (Sta.)	25.00 m.		3.00 d.		
Delaware:					
Wilmington (Fed.)	5.00-8.00 w.		.30-.40 h.		7.00-10.00 w.
District of Columbia:					
Washington (Fed.)	20.00-25.00 m.	75.00 m.	.35 h.	.18 h.	30.00 m.
Florida:					
Jacksonville (Fed.)			2.00-3.50 d.		
Miami (Fed.)					
Tampa (Fed.)			.20 h.		
Georgia:					
Atlanta (Fed.-Sta.)	5.00 w.	.65 h.	.25 h.		
Savannah (Fed.)	.60 d.	4.00 d.	2.25 d.	1.00 d.	.75 d.
Idaho:					
Boise (Mun.)	35.00 m.		3.50 d.	$9.00-15.00 w.	9.00 w.
Moscow (Fed.)	5.00 w.	80.00 m.	3.50 d.	60.00 m.	40.00 m.
Illinois:					
Chicago (Fed.)	7.00-10.00 w.	.53½ h.	.32-.42 h.		9.00-12.00 w.
Chicago (Sta.)	5.00-10.00 w.	$0.40-.50 h.	.40 h.	18.00 w.	8.50 up. w.
East St. Louis (Sta.)	5.00 w.	.75 h.	.35 h.	20.00 w.	9.00 w.
Peoria (Sta.)	5.00-6.00 w.		.30-.35 h.	13.00 w	2.10 d.
Rockford (Sta.)	6.00 w.	.65-.75 h.	.33-.50 h.	12.00-14.00 w.	8.00 w.
Rock Island-Moline (Sta.)	7.00 w.	.62½ h.	3.00-3.75 d.	17.25 w.	9.00 w.
Springfield (Sta.)	35.00-40.00 m.	.50 h.	.25-.50 h.	2.00 d.	1.00 d.
Indiana:					
Evansville (Sta.)	3.00-5.00 w.		2.50 d.		
Fort Wayne (Sta.)			.30 h.		
Indianapolis (Fed.)	7.00 w.		.35 h.		8.00 w.
Indianapolis (Sta.)	10.00 w.		3.00 d.		
South Bend (Sta.)	5.00 w.		.30 h.		
Terre Haute (Sta.)			.27½-.30 h.	18.00 w.	
Iowa:					
Des Moines (Fed.-Sta.)			.32½ h.		
Davenport (Fed.-Sta.)	7.00 w.		3.58 d.		
Kansas:					
Topeka (Fed.-Sta.)	4.00-8.00 w.	.60 h.	.22-.32 h.	15.00 w.	5.00-$8.00 w.
Kentucky:					
Louisville (Sta.)	5.00 w.		.25-.40 h.		
Louisville (Mun.-Pri.)	4.00-6.00 w.		2.50 d.		7.00 w.
Louisiana:					
New Orleans (Fed.-Sta.-Mun.)	[1] 20.00 m.	.65 h.	.30 h.	45.00 m.	35.00 m.
Maryland:					
Baltimore (Fed.)	6.00-8.00 w.	.52-.70 h.	.30-.35 h.		
Massachusetts:					
Boston (Fed.)	8.00 w.	4.00 d.	.30-.40 h.		25.00 m.
Boston (Sta.)	[1] 5.00-10.00 w.	5.00 d.	.35-.40 h.	16.00 w.	5.00-8.00 w.
Springfield (Sta.)	5.00-8.00 w.	.45 h.	.30-.37½ h.		25.00 m.
Worcester (Sta.)	[1] 7.00 w.		3.00 d.		

[1] And board and room. [2] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
.....	.....	.....	.....	.....	.....
$5.60 d.	.....	$5.00 d.	.....	.....	$10.00 w.
.52 h.	.....	.75 h.	$6.00 d.	$0.75 h.	8.00 w.
.72 h.	$5.25 d.	4.00 d.	6.00 d.	5.00 d.	10.00 w.
$5.25–5.40 d.	.....	5.50 d.	7.00 d.	7.00 d.	.....
.50 h.	.....	$3.50–5.00 d.	.....	.....	$7.00–12.00 w.
5.80 d.	5.80 d.	3.50 d.	.....	5.84 d.	.....
.....	.....	.....	.....	.....	.....
.52 h.	.....	3.25 d.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.57½ h.	.....	.....	.....	.....	.....
.52½ h.	.....	6.00 d.	.....	.....	10.00 w.
.50–.70 h.	.....	.60 h.	.....	.60 h.	.....
.....	.....	.30 h.	.....	.....	.....
.....	.....	4.00 d.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	30.00 w.	.....	.....
.72½ h.	.....	.62½ h.	.....	.72½ h.	.....
.62½ h.	.62½ h.	.62½ h.	.62½ h.	.62½ h.	10.00–12.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.65 h.	.....	.....	.....	.....	.....
.50–.70 h.	.50 h.	.50 h.	.70 h.	.70 h.	8.00–15.00 w.
.51 h.	3.50 d.	4.00 d.	4.00 d.	5.00 d.	10.00 w.
.55 h.	.....	.....	.....	.....	.....
5.84 d.	5.28 d.	5.04 d.	6.00 d.	5.28 d.	70.00 m.
.55–.65 h.	5.25 d.	.....	.....	.....	.....
.50 h.	$3.00–6.00 d.	.60 h.	.50 h.	.60 h.	8.00–10.00 w.
.51 h.	.58 h.	.60 h.	.87½ h.	.87½ h.	8.00 w.
.40 h.	5.00 d.	.....	.....	.....	.....
.35–.45 h.	.35–.40 h.	.55–.60 h.	.62½ h.	[2] 7.00 d.	8.00 w.
4.00–6.00 d.	4.00–8.00 d.	.65 h.	.75 h.	5.45 d.	10.00 w.
.35–.55 h.	.45–.65 h.	.50–.60 h.	.65 h.	.65 h.	.....
.55 h.	.....	.....	.....	.....	.....
.45–.50 h.	4.10 d.	.....	.....	.65 h.	.....
.37½ h.	.....	.....	.....	.....	8.00 w.
.35–.65 h.	.....	.40–.50 h.	.....	.....	.....
.55 h.	4.00 d.	.....	.....	.....	.....
.....	.....	.50 h.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.50 h.	.....	.55 h.	.....	.....	.....
.50 h.	4.50 d.	.50 h.	.87½ h.	.75 h.	6.00–15.00 w.
.60 h.	.....	18.50 w.	.....	.....	.....
.....	.....	.40 h.	.....	.....	8.00 w.
4.20 d.	.45 h.	.50 h.	.40 h.	.70 h.	6.00 w.
.52–.72½ h.	.....	.50–.60 h.	.....	$0.46–.59 h.	8.00 w.
.72 h.	.72 h.	.65 h.	.....	.72 h.	.....
.55–.60 h.	5.25 d.	5.50 d.	4.70 d.	5.50 d.	8.00–12.00 w.
.60 h.	.....	.60 h.	.....	.....	.....
.62½–.72½ h.	4.50 d.	4.00 d.	.....	.....	.....

[2] For 8 hours.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Alabama:					
Mobile (Fed.)					
Arizona:					
Phoenix (Fed.)				$100.00 m.	$80.00 m.
Arkansas:					
Little Rock (Fed.)	$1.50 d.			100.00 m.	85.00 m.
California:					
Los Angeles (Fed.-Sta.-Mun.)	2.00 d.		$10.00 w.	$75.00-100.00 m.	$50.00-75.00 m.
Sacramento (Fed.-Sta.)				80.00-120.00 m.	50.00-100.00 m.
San Diego (Fed.)	$2.50-3.00 d.		12.00 w.	75.00-100.00 m.	10.00 w.
San Francisco (Fed.)				100.00 m.	
Santa Barbara (Fed.)					
Colorado:					
Colorado Springs (Sta.)					6.00 w.
Denver No. 1 (Sta.)					
Denver No. 2 (Sta.)					[1] 10.00 w.
Pueblo (Sta.)	1.50 d.				
Connecticut:					
Bridgeport (Fed.-Sta.)					8.00-18.00 w.
Hartford (Sta.)					
New Haven (Sta.)					
Norwich (Sta.)					
Waterbury (Sta.)	25.00 m.				
Delaware:					
Wilmington (Fed.)				75.00 m.	
District of Columbia:					
Washington (Fed.)	1.50-2.00 d.	$3.00 d.	2.50 d.	1,000.00 y.	1,000.00-1,200 y
Florida:					
Jacksonville (Fed.)					
Miami (Fed.)					
Tampa (Fed.)					
Georgia:					
Atlanta (Fed.-Sta.)				75.00-100.00 m.	60.00-100.00 m.
Savannah (Fed.)	1.75 d.	2.00 d.	1.75 d.	85.00 m.	60.00 m.
Idaho:					
Boise (Mun.)					
Moscow (Fed.)	2.00 d.		2.00 d.	90.00 m.	50.00 m.
Illinois:					
Chicago (Fed.)	7.00 9.00 w.		9.00-25.00 w.	100.00 m.	12.00-20.00 w.
Chicago (Sta.)	9.00 w.		9.00 up w.	70.00-100.00 m.	15.00-20.00 w.
East St. Louis (Sta.)	.20 h.	30.00 w.	.20 h.	90.00 m.	75.00 m.
Peoria (Sta.)					
Rockford (Sta.)	2.00 d.				35.00-45.00 w.
Rock Island-Moline (Sta.)	2.00 d.	100.00 m.	1.50 d.	80.00-100.00 m.	75.00 m.
Springfield (Sta.)				50.00-90.00 m.	
Indiana:					
Evansville (Sta.)					2.00 d.
Fort Wayne (Sta.)					10.00 w.
Indianapolis (Fed.)	2.00 d.				18.00 w.
Indianapolis (Sta.)					
South Bend (Sta.)					
Terre Haute (Sta.)					
Iowa:					
Des Moines (Fed.-Sta.)					
Davenport (Fed.-Sta.)				18.00 w.	
Kansas:					
Topeka (Fed.-Sta.)	10.00 w.			70.00 m.	60.00 m.
Kentucky:					
Louisville (Sta.)					
Louisville (Mun.-Pri.)			8.00 w.		10.00 w.
Louisiana:					
New Orleans (Fed.-Sta.-Mun.)	1.00 d.	75.00 m.	60.00 m.	85.00 m.	50.00 m.
Maryland:					
Baltimore (Fed.)	1.50 d.		10.00 w.	18.00-25.00 w.	15.00 w.
Massachusetts:					
Boston (Fed.)			9.00-35.00 w.	18.00 w.	20.00 w.
Boston (Sta.)	2.00-2.50 d.	$18.00-32.00 w.	8.00-25.00 w.	17.00-24.00 w.	8.00-22.00 w.
Springfield (Sta.)		20.00 w.	12.00 w.		
Worcester (Sta.)	[1] 2.00 d.		2.00 d.		

[1] And board. [2] And found.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
.....	.....	.....	.....	.....	.....
.....	.....	$17.50 w.	$12.00 w.	$3.00 d.	$0.35 h.
$6.00 d.	.....	10.00 w.	6.00 w.	2.50 d.	.....
.....	$14.00 w.	14.00 w.	9.00 w.	.35 h.	.30 h.
6.00 d.	.....	12.00 w.	12.00 w.	$0.30–.40 h.	$0.25–.30 h.
.....	.....	17.00 w.	9.00 w.	.35 h.	.30 h.
.....	.....	[1] $40.00–45.00 m.	[2] $25.00–35.00 m.	.50 h.	.25–.35 h.
.....	.....	.....	.....	.....	.....
.....	.....	10.00 w.	8.00 w.	.35 h.	.25 h.
.....	.....	40.00 m.	30.00 m.	2.50 d.	2.00 d.
.....	.....	12.00 w.	10.00 w.	.40 h.	.35 h.
5.60 d.	.....	.....	8.00 w.	.30 h.	.25 h.
.45 h.	.....	10.00–15.00 w.	9.00–10.00 w.	.35 h.	.30 h.
.....	.....	17.00 w.	.....	.30–.40 h.	[3] .25 h.
.....	.....	.....	7.00–8.00 w.	.35 h.	.25 h.
.....	.....	.....	[1] 7.00–10.00 w.	2.75 d.	2.00 d.
.....	.....	15.00 w.	10.00 w.	3.00 d.	.25 h.
.....	10.00 w.	.....	7.00 w.	.....	.....
.80 h.	12.00 w.	50.00 m.	22.00 m.	.35 h.	1.00–1.35 d.
.....	.....	50.00 m.	.....	1.50–2.00 d.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.75 h.	50.00 m.	8.00 w.	.....	.....	.....
.....	2.00 d.	25.00 m.	20.00 m.	1.50 d.	1.00 d.
.....	.....	18.00 w.	10.00 w.	.35–.40 h.	.35 h.
5.28 d.	40.00 m.	60.00 m.	40.00 m.	3.50 d.	1.50 d.
.80 h.	$9.00–14.00 w.	.....	[3] 27.50 m.	.....	2.10 d.
.70 h.	[3] 30.00 m.	11.00–12.00 w.	[3] 30.00 w.	.27½–.40 h.	2.10–2.60 d.
.70 h.	10.00 w.	18.00 w.	8.00 w.	.30 h.	.15 h.
.....	.....	10.00 w.	8.00 w.	.....	.....
.....	.....	12.00 w.	1.00–1.50 d.	.25–.35 h.	.20–.25 h.
.80 h.	12.00 w.	12.00 w.	9.00 w.	3.00–3.58 d.	.25 h.
$0.50–.70 h.	25.00 m.	8.00–15.00 w.	.....	.....	.....
.....	.....	.....	1.00 d.	.....	.....
.45 h.	.....	.....	1.00 d.	.25–.30 h.	1.50 d.
.....	.....	.....	7.00 w.	.30 h.	1.50 d.
.....	.....	25.00 m.	25.00 m.	.30–.35 h.	1.50 d.
.....	.....	.....	6.00 w.	.....	.....
.....	.....	12.00 w.	.....	.30 h.	.....
.....	.....	.....	.....	.....	.....
.....	.....	[1] 12.00 w.	[1] 8.00 w.	.35 h.	2.00 d.
.....	22.50 m.	12.00–15.00 w.	4.50–15.00 w.	.25 h.	.25 h.
.....	.....	.....	.....	.....	.....
.....	.....	5.00 w.	7.00 w.	2.00 d.	1.35 d.
.65 h.	45.00 m.	[3] 1.00 d.	[3] 1.00 d.	1.00 d.	1.00 d.
.....	12.00 w.	.....	4.50 w.	.....	6.00 w.
.70 h.	.....	.....	7.00 w.	.30 h.	7.00 w.
.45–.65 h.	10.00–15.00 w.	[1] 12.00 w.	[1] 7.00–10.00 w.	.35 h.	.20–.35 h.
.....	.....	.....	6.00 w.	.30–.35 h.	.20–.25 h.
.....	.....	[4] 23.50 m.	[4] 5.00 w.	.30 h.	.25 h.

[3] And board and room.

[4] And board, room, and laundry.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Michigan:					
Battle Creek (Sta.)	$0.45 h.	$0.55 h.		$0.55-$0.60 h.	$0.30 h.
Bay City (Sta.)				.55 h.	
Detroit (Fed.)				.50 h.	
Detroit (Sta.)	.50 h.	.65 h.	$.75 h.	.55-.60 h.	.25 h.
Flint (Sta.)				.65 h.	.25 h.
Grand Rapids (Sta.)	.40 h.			.40-.50 h.	.25 h.
Jackson (Sta.)	$0.45-.75 h.	$0.45-.75 h.	.75 h.	.55 h.	$0.25-.30 h.
Kalamazoo (Sta.)				.60 h.	.30-.35 h.
Lansing (Sta.)	.50 h.		.80 h.	.65 h.	.30 h.
Muskegon (Sta.)				.65 h.	.30 h.
Saginaw (Sta.)					2.00 d.
Minnesota:					
Duluth (Sta.)	3.80 d.			.60 h.	
Minneapolis (Fed.)	3.00-4.00 d.	.40-.60 h.	.75 h.	.60 h.	.35 h.
Minneapolis (Sta.)					
St. Paul (Sta.)	.44 h.	.43 h.	.70 h.	.55 h.	.30 h.
Mississippi:					
Gulfport (Fed.)				3.50 up d.	
Missouri:					
Kansas City (Fed.-Sta.)	.40 h.	0.50-0.60 h.	7.00 d.	0.50-.65 h.	.30 h.
St. Joseph (Sta.)				.60 h.	1.50 d.
St. Louis (Fed.-Sta.)		.50 h.		7.00 d.	1.60 d.
Montana:					
Butte (Mun.)					.35 h.
Helena (Fed.)	4.00 d.	4.40 d.	8.00 d.	6.00 d.	3.00 d.
Nebraska:					
Lincoln (Fed.-Sta.)					
Omaha (Fed.-Sta.-Co.-Mun.)				.60 h.	.25 h.
Nevada:					
Reno (Fed.)	5.00 d.	4.50 d.	6.00 d.	4.00-5.50 d.	.35 h.
New Jersey:					
Jersey City (Fed.)	.62½ h.				
Newark (Fed.-Sta.-Mun.)	.30 .60 h.			.35-.65 h.	2.00 d.
Orange (Fed.)				.52 h.	.25 h.
New Mexico:					
Camp Cody, Deming, (Fed.)				.75 h.	
New York:					
Albany (Sta.)	.59 h.	.40 h.	.65 h.	.50½ h.	30.00 m.
Buffalo (Fed.)	.50-.55 h.	.54 h.	0.50-.60 h.	.62 h.	.20 h.
Buffalo (Sta.)	.50 h.		.75 h.	.50-.62 h.	1.75-2.00 d.
New York City (Fed.)	.70 h.	.72 h.	.45-.60 h.	.62½ h.	10.00 w.
New York City (Sta.)	5.00 d.	4.50 d.	6.00 d.	5.50 d.	2.00 d.
New York City (Mun.)	5.50 d.	4.50 d.	5.50 d.	5.50 d.	10.00 w.
Rochester (Sta.)	19.50 w.			3.50-4.50 d.	7.00-9.00 w.
Syracuse (Sta.)	.40-.50 h.	.40 h. up.	.70 h.	.55 h.	.25 h.
Ohio:					
Akron (Sta.-Mun.)	.50 h.	.55 h.	.70 h.	.60 h.	.25 h.
Athens (Sta.-Mun.)					
Canton (Sta.-Mun.)	.45-.55 h.	.50 h.	.75 h.	.60 h.	.25 h.
Chillicothe (Sta.-Mun.)	.50 h.	.50 h.		.60 h.	1.50 d.
Cincinnati (Sta.-Mun.)	.55 h.	.55 h.	.90 h.	.65 h.	1.60 d.
Cleveland (Fed.)	.50 h.	.62½ h.	.80 h.	.70 h.	2.00 d.
Cleveland (Sta.-Mun.)	.50-.72½ h.	.50-.70 h.	.70-.80 h.	.50-.70 h.	[5] 2.10 d.
Columbus (Sta.-Mun.)				.65 h.	1.75 d.
Dayton (Sta.-Mun.)	.45 h.		.80 h.	.60 h.	2.10 d.
Hamilton (Sta.-Mun.)	.45 h.			.60 h.	1.25 d.
Lima (Sta.-Mun.)	.50 h.	.50 h.	.75 h.	.40 h.	.20 h.
Mansfield (Sta.-Mun.)	.45 h.		.70 h.	.65 h.	.25 h.
Marietta (Sta.-Mun.)				.45-.50 h.	
Marion (Sta.-Mun.)	.45 h.	.45 h.	.75 h.	.55 h.	2.00 d.
Portsmouth (Sta.-Mun.)	.67 h.	.67 h.	.79½ h.	.65 h.	.25 h.
Sandusky (Sta.-Mun.)	4.00 d.	.45 h.		.50 h.	.25 h.
Springfield (Sta.-Mun.)	.40-.45 h.	.42½-.55 h.	.72 h.	.55 h.	1.50 d.
Steubenville (Sta.-Mun.)	.65 h.	.65 h.	.75 h.	.80 h.	2.00 d.
Tiffin (Sta.-Mun.)	.40 h.		.60 h.	.50 h.	1.00 d.
Toledo (Sta.-Mun.)	.50 h.	.55 h.	.70 h.	.50 h.	.25 h.
Washington C. H. (Sta.-Mun.)				.50 h.	
Youngstown (Sta.-Mun.)	.55 h.	.57½ h.	.90 h.	.75 h.	2.10 d.
Zanesville (Sta.-Mun.)	.45 h.		.75 h.	.60 h.	.15 h.

[1] And board.
[2] And board and room.
[3] And board and room to single men and house and privileges to married men.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$15.00 w.	$10.00 w.	$20.00 w.		$35.00–$50.00 m.	
	$6.00– 8.00 w.			35.00–$55.00 m.	
50.00 m.	[1] 10.00–12.00 w.			45.00 m.	
[1] 16.00 w.	[1] 10.00–12.00 w.	.40 h.	$0.40 h.	40.00 m.	$0.50 h.
		[1] 10.00 w.		40.00 m.	
12.00 w.	9.00 w.	15.00 w.		30.00– 50.00 m.	
$60.00– 80.00 m.	50.00–75.00 m.	2.70 d.	$0.31– .35 h.	40.00– 50.00 m.	$0.33– .40 h.
16.00 w.	12.00 w.	18.00 w.		35.00– 45.00 m.	
[1] 120.00 m.	[1] 75.00 m.	3.50 d.		[1] 45.00 m.	.40 h.
				35.00 m.	
		18.00 w.		45.00 m.	
75.00 m.	35.00–65.00 m.	3.00 d.	3.00 d.	50.00 m.	
60.00– 75.00 m.	10.00–18.00 w.	$15.00–20.00 w.	2.50– 3.00 d.	30.00– 60.00 m.	.50 h.
60.00– 70.00 m.	40.00–50.00 m.	3.00 d.		50.00 m.	
50.00 m.	25.00 m.	3.10 d.	.30 h.	35.00– 45.00 m.	3.00 d.
14.00–18.00 w.	6.00–10.00 w.	14.00–16.00 w.		30.00–60.00 m.	0.45 h.
12.00–18.00 w.	7.00–12.00 w.	14.00 w.		40.00–75.00 m.	
[2] 14.00 w.	[1] 25.00 m.			[1] 40.00 m.	
25.00 w.	17.50 w.			[1] 60.00 m.	
26.50 w.	21.00 w.	3.75 d.		50.00 m.	6.00 d.
				[1] 50.00 m.	
3.00 d.	12.00 w.	3.00 d.		50.00–60.00 m.	
70.00–90.00 m.	40.00–65.00 m.			2.00–2.50 d.	
	30.00 m.	75.00–100.00 m.	$0.35 h.		
50.00–90.00 m.	30.00–40.00 m.	15.00–18.00 w.		20.00–60.00 m.	
	30.00–40.00 m.		.37½ h.	30.00 m.	
60.00 m.					
75.00 m.	50.00 m.	16.00 w.	.30 h.	[3] 35.00–45.00 m.	.32½ h.
[1] 40.00–75.00 m.	[2] 24.00–45.00 m.	75.00 m.	0.30–.50 h.	[2] 35.00–70.00 m.	0.40–.45 h.
60.00–90.00 m.	8.00–12.00 w.	18.00–20.00 w.	.35–.40 h.	25.00–35.00 m.	
80.00 m.	45.00 m.	18.00 w.	.30 h.	40.00–50.00 m.	3.50 d.
[1] 75.00 m.	[1] 40.00–50.00 m.	21.00 w.	.35 h.	40.00 m.	
40.00–60.00 m.	25.00–50.00 m.	15.00–20.00 w.	.60 h.	35.00–50.00 m.	3.75 d.
15.00–20.00 w.	7.00–12.00 w.	15.00–18.00 w.		15.00–30.00 m.	
15.00–30.00 w.	8.00–18.00 w.	15.00–18.00 w.		30.00–60.00 m.	.37½ h.
20.00 w.	10.00–15.00 w.	3.25 d.		35.00 m.	.50 h.
				40.00 m.	
20.00 w.	8.00 w.	20.00 w.	.30 h.	30.00–40.00 m.	.50 h.
18.00 w.	10.00 w.	.35 h.		1.50 d.	
[4] 80.00 m.	[4] 45.00 m.	18.00 w.		[4] 35.00 m.	.45 h.
25.00–30.00 w.	12.00–15.00 w.	18.00 w.	.38–.40 h.	35.00–50.00 m.	.45 h.
[1] 45.00–55.00 m.	10.00–15.00 w.	18.00–22.00 w.	.55 h.	35.00–50.00 m.	.50 h.
18.00–20.00 w.	7.00 w.	2.75 d.		35.00–45.00 m.	
2.70 d.		3.00 d.		40.00 m.	
	5.50 w.	.30 h.		35.00 m.	
22.50 w.	12.00 w.	18.00 w.	.32½ h.	35.00 m.	.45 h.
20.00 w.	12.00 w.	.40 h.		25.00–45.00 m.	.45 h.
				[6] 30.00–40.00 m.	2.75–3.25 d.
50.00–60.00 m.	25.00–35.00 m.	.30 h.		30.00–45.00 m.	.40 h.
	8.00 w.	.27½ h.		35.00 m.	.30 h.
	10.00 w.	3.00 d.	.35 h.	35.00–60.00 m.	
65.00–120.00 m.	7.00 w.	3.00–3.50 d.		35.00–45.00 m.	.45 h.
70.00 m.	12.00 w.	22.00 w.		35.00 m.	.45 h.
15.00 w.		3.00 d.		40.00 m.	
[2] 16.00 w.	[1] 15.00 w.	18.00 w.	.35 h.	35.00–50.00 m.	.45 h.
				1.50 d.	
90.00 m.	70.00 m.	3.50 d.		40.00 m.	.40 h.
20.00 w.	10.00 w.	15.00 w.		35.00 m.	.40 h.

[4] And maintenance.
[5] For 8 hours.
[6] And keep.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operators, male.	Laundry operators, female.
Michigan:					
Battle Creek (Sta.)	$5.00-7.00 w.		$0 35-.40 h.	$18.00 w.	$10.00 w.
Bay City (Sta.)	4.50 w.		.25-.30 h.		
Detroit (Fed.)			.35-.43 h.		
Detroit (Sta.)	8.00 w.	$0.72 h.	.40-.45 h.	19.00 w.	2.50 d.
Flint (Sta.)	6.00 w.		.35 h.		
Grand Rapids (Sta.)	3.00-6.00 w.		3.00-3.50 d.	15.00 w.	
Jackson (Sta.)	5.00-7.00 w.	$50.00-55.00 m.	.35-.40 h.	18.00-25.00 w.	$9.00-12.00 w.
Kalamazoo (Sta.)	5.00 w.		.35 h.		
Lansing (Sta.)	8.00 w.	.45 h.	.40 h.	3.50 d.	2.00 d.
Muskegon (Sta.)			.35 h.		
Saginaw (Sta.)			3.50 d.		
Minnesota:					
Duluth (Sta.)	20.00-40.00 m.		3.50 d.		
Minneapolis (Fed.)	5.00-9.00 w.	.62½ h.	2.50 d.	15.00-18.00 w.	8.00 w.
Minneapolis (Sta.)	7.00 w.		.30-.35 h.		
St. Paul (Sta.)	2.00 d.		.30 h.	.25 h.	.25 h.
Mississippi:					
Gulfport (Fed.)			.25 up h.		
Missouri:					
Kansas City (Fed.-Sta.)	5.00-7.00 w.	.60 h.	.30-.45 h.	15.00 w.	5.50-9.00 w.
St. Joseph (Sta.)	5.00-7.00 w.		.25-.40 h.	15.00 w.	7.00-9.00 w.
St. Louis (Fed.-Sta.)	[1] 25.00 m.		.30 h.		1.60 d.
Montana:					
Butte (Mun.)	35.00-40.00 m.		4.50 d.		
Helena (Fed.)	35.00 m.	5.25 d.	3.50 d.	24.00 w.	18.00 w.
Nebraska:					
Lincoln (Fed.-Sta.)			.40 h.		
Omaha (Fed.-Sta.-Co.-Mun.)	8.00 w.		.35 h.		.25 h.
Nevada:					
Reno (Fed.)	30.00 m.		3.00-3.11 d.		
New Jersey:					
Jersey City (Fed.)	30.00 m.		.40 h.		
Newark (Fed.-Sta.-Mun.)	30.00-35.00 m.		.27½-.40 h.		
Orange (Fed.)	30.00-50.00 m.		.30 h.		1.85 d.
New Mexico:					
Camp Cody, Deming (Fed.)			[2] 60.00 m.		
New York:					
Albany (Sta.)	6.00-7.00 w.	.56 h.	.33⅓ h.	12.00 w.	7.00 w.
Buffalo (Fed.)	[2] 5.00-6.00 w.	.30-.40 h.	.30-.45 h.	.27-.37 h.	.16-.20 h.
Buffalo (Sta.)	[1] 50.00 m.	.40-.50 h.	.30-.35 h.	17.00 w.	8.00 w.
New York City (Fed.)	35.00 m.	.45 h.	.40 h.	18.00 w.	22.00 m.
New York City (Sta.)	30.00 m.	3.50-5.00 d.	.35 h.	17.00 w.	13.00 w.
New York City (Mun.)	25.00-40.00 m.	5.00 d.	.40 h.		2.00 d.
Rochester (Sta.)	3.50-9.00 w.		.32½-.37½ h.		30.00-32.00 m.
Syracuse (Sta.)	6.00-9.00 w.		.28-.37 h.		7.00-10.00 w.
Ohio:					
Akron (Sta.-Mun.)	7.00 w.	.50 h.	.35 h.	18.00 w.	8.00 w.
Athens (Sta.-Mun.)			.35 h.		
Canton (Sta.-Mun.)	6.00 w.	.40-.50 h.	.30-.40 h.	18.00 w.	8.00 w.
Chillicothe (Sta.-Mun.)		.62½ h.	.35 h.	16.00 w.	8.00 w.
Cincinnati (Sta.-Mun.)	[3] 45.00 m.	.55 h.	.35 h.	18.00 w.	12.00 w.
Cleveland (Fed.)	7.00-10.00 w.	.78½ h.	.35-.40 h.		9.00 w.
Cleveland (Sta.-Mun.)	8.00-9.00 w.	.75 h.	.35-.45 h.	12.00-18.00 w.	8.00-10.00 w.
Columbus (Sta.-Mun.)	6.00 w.		.35 h.		
Dayton (Sta.-Mun.)	[2] 6.00 w.	.55 h.	.35 h.	18.00 w.	
Hamilton (Sta.-Mun.)	5.00 w.		.33⅓ h.		
Lima (Sta.-Mun.)	10.00 w.	.40 h.	.35 h.		.20 h.
Mansfield (Sta.-Mun.)	7.00 w.	100.00 m.	.45 h.	15.00 w.	8.00 w.
Marietta (Sta.-Mun.)	4.00-6.00 w.		.25-.30 h.		1.00 d.
Marion (Sta.-Mun.)	5.00 w.	.40 h.	.30-.35 h.		
Portsmouth (Sta.-Mun.)	5.00 w.		.30 h.		6.00 w.
Sandusky (Sta.-Mun.)	7.00 w.	.60 h.	.35 h.		7.00 w.
Springfield (Sta.-Mun.)	5.00 w.	.45 h.	.30-.35 h.	15.00-18.00 w.	7.00-9.00 w.
Steubenville (Sta.-Mun.)	7.00 w.	.65 h.	.38 h.		
Tiffin (Sta.-Mun.)	6.00 w.	100.00 m.	.35 h.		
Toledo (Sta.-Mun.)	5.00 w.	5.00 d.	.35-.40 h.	15.00 w.	8.00 w.
Washington C. H. (Sta.-Mun.)			.25 h.		
Youngstown (Sta.-Mun.)	7.00 w.	.68 h.	.38½ h.	80.00 m.	9.00 w.
Zanesville (Sta.-Mun.)	6.00 w.	.65 h.	.35 h.	18.00 w.	9.00 w.

[1] And board and room.

[2] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Machinists.	Molders.	Painters.	Plasterers.	Plumbers.	Saleswomen.
$0.35–$0.40 h.	$0.45 h.				$6.00 w.
.40–.80 h.	4.75 d.				$8.00–15.00 w.
.50 h.		$0.55–.60 h.	$0.72½ h.	$0.75 h.	12.00 w.
		.50 h.			
.45–.75 h.	4.50 d.	.55 h.	$0.50–.60 h.	.60–.75 h.	6.00–12.00 w.
.59–.60 h.					
.45 h.	.45 h.	.45 h.	.75 h.	.75 h.	1.50 d.
.55 h.	.50 h.				
.53 h.					
3.50–4.00 d.	3.00–4.00 d.	.55 h.	.75 h.	.55 h.	10.00 w.
	.50 h.				8.00 w.
.62½ h.		.55 h.	.70 h.	.62 h.	
		.50 h.			
.50 h.	5.20 d.	.40–.65 h.	7.00 d.	6.00 d.	
.60–.80 h.		.60 h.			7.00 w.
.50 h.					
4.00 d.	6.00 d.	6.00 d.	8.00 d.	8.00 d.	50.00 up m.
.55 h.					10.00 w.
5.00 d.					
.70 h.		5.50 d.			
.40–.65 h.		15.00–21.00 w.			8.00–13.00 w.
.45 h.				.35 h.	
.65 h.	4.00 d.	4.50 d.	.65 h.	.62½ h.	7.00 w.
.45–.70 h.	.45–.50 h.	.35–.42 h.	.50–.60 h.	.52 h.	7.00–20.00 w.
.50–.55 h.	.50–.55 h.	.40–.50 h.		.65 h.	8.00–12.00 w.
.55 h.	18.00–25.00 w.	.45–.55 h.	.65 h.	.38–.68 h.	12.00 w.
.56 h.	4.00 d.	5.00 d.	5.00 d.	5.00 d.	10.00 w.
6.00 d.	5.00 d.	3.50–5.00 d.	6.00 d.	6.00 d.	9.00–15.00 w.
.40–.50 h.					5.00–15.00 w.
.40–.55 h.		.60 h.	.65 h.	.80 h.	7.00–8.00 w.
.65 h.	.60 h.	.50 h.	.60 h.	.60 h.	9.00–10.00 w.
.50 h.	.50 h.	.50–.60 h.	.60–.70 h.	.60–.70 h.	8.00 w.
.50 h.		.45 h.		.70 h.	12.00 w.
.50 h.	.50 h.	.40 h.	.75 h.	28.00 w.	1.25 d.
.50–.70 h.	5.50 d.	67½–.72 h.	.75 h.	.81¼ h.	8.00–15.00 w.
.50–.75 h.	4.50–5.00 d.	.60–.70 h.	.70 h.	.75 h.	10.00–35.00 w.
	.50 h.			.75 h.	
.55–.60 h.	5.50 d.	.50 h.		.60 h.	
.47½ h.		3.50 d.			
.43 h.	.45 h.	.40 h.	.65 h.	.55 h.	8.00 w.
6.50 d.	.50 h.	.45 h.	.50 h.	.60 h.	8.00 w.
		2.75–3.25 d.			5.00–15.00 w.
.35–.50 h.	.45 h.	.40 h.		.55 h.	8.00–12.00 w.
.50½ h.	.67½ h.	.50 h.			10.00 w.
.50 h.	4.00 up d.				6.00 w.
.40–.50 h.	4.50 d.	.45 h.	.65 h.	.58 h.	7.00–18.00 w.
.70 h.		.65 h.		.70 h.	9.00 w.
.60 h.	.45 h.	.40 h.		.50 h.	8.00 w.
.60 h.	.37½ h.	.50 h.	.70 h.	.62½ h.	8.00 w.
.69 h.	5.50 d.	.69 h.	.68 h.	.75 h.	10.00 w.
.40 h.	5.00 d.	.50 h.	.55 h.	.60 h.	10.00 w.

[a] And maintenance.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Michigan:					
Battle Creek (Sta.)				$65.00 m.	$12.00 w.
Bay City (Sta.)					$5.00–12.00 w.
Detroit (Fed.)	$2.50 d.		$0.30 h.		65.00-100.00 m.
Detroit (Sta.)	2.50 d.		2.50 d.		
Flint (Sta.)					
Grand Rapids (Sta.)					18.00 w.
Jackson (Sta.)	$8.00–15.00 w.		$8.00–15.00 w.	$8.00–20.00 w.	8.00–20.00 w.
Kalamazoo (Sta.)					
Lansing (Sta.)	2.00 d.		3.50 d.		3.00 d.
Muskegon (Sta.)					
Saginaw (Sta.)					
Minnesota:					
Duluth (Sta.)					
Minneapolis (Fed.)	8.00–40.00 w.	[1]18.00–35.00 w.	12.00 w.	18.00–25.00 w.	40.00–75.00 m.
Minneapolis (Sta.)			9.00 w.		12.00 w.
St. Paul (Sta.)					
Mississippi:					
Gulfport (Fed.)					
Missouri:					
Kansas City (Fed.-Sta.)				65.00-100.00m.	10.00-18.00 w.
St. Joseph (Sta.)					40.00 m.
St. Louis (Fed.-Sta.)	6.00 w.			75.00 m.	
Montana:					
Butte (Mun.)					
Helena (Fed.)	3.00 d.			75.00-100.00 m.	50.00–80.00 m.
Nebraska:					
Lincoln (Fed.-Sta.)					60.00 m.
Omaha (Fed.-Sta.-Co.-Mun.)	2.00 d.				75.00 m.
Nevada:					
Reno (Fed.)					
New Jersey:					
Jersey City (Fed.)				75.00 m.	50.00 m.
Newark (Fed.-Sta.-Mun.)			10.00 w.	12.00-30.00 w.	10.00-18.00 w.
Orange (Fed.)	.25 h.				
New Mexico:					
Camp Cody, Deming (Fed.)					
New York:					
Albany (Sta.)	12.00 w.	$8.00 w.	8.00 w.	15.00 w.	14.00 w.
Buffalo (Fed.)	9.00–18.00 w.	.20–.25 h.	.15 h.	800–1,200 y.	600–1,000 y.
Buffalo (Sta.)	1.50–2.00 d.	15.00 w.	6.00–7.00 w.	15.00–25.00 w.	8.00–15.00 w.
New York City (Fed.)	2.50 d.	13.00–18.00 w.	12.00 w.	18.00 w.	18.00 w.
New York City (Sta.)	2.00 d.	20.00–25.00 w.	12.00–18.00 w.	12.00–25.00 w.	12.00–20.00 w.
New York City (Mun.)	2.50 d.		8.00–20.00 w.	25.00 w.	15.00–20.00 w.
Rochester (Sta.)	1.50–2.50 d.		7.00–12.00 w.	18.00–25.00 w.	7.00–18.00 w.
Syracuse (Sta.)	2.00 d.		10.00–15.00 w.	15.00–18.00 w.	12.00–18.00 w.
Ohio:					
Akron (Sta.-Mun.)	2.00 d.		9.00 w.	80.00 m.	70.00 m.
Athens (Sta.-Mun.)					
Canton (Sta.-Mun.)	8.00 w.		8.00 w.	25.00 w.	12.00-18.00 w.
Chillicothe (Sta.-Mun.)				25.00 w.	18.00 w.
Cincinnati (Sta.-Mun.)	3.00 d.	21.00 w.	16.00 w.	100.00 m.	55.00 m.
Cleveland (Fed.)	2.50–3.00 d.		15.00 w.	90.00-100.00 m.	75.00-90.00 m.
Cleveland (Sta.-Mun.)	2.50–3.00 d.	15.00-35.00 w.	9.00-18.00 w.	100.00-125.00 m.	90.00-100.00 m.
Columbus (Sta.-Mun.)					75.00 m.
Dayton (Sta.-Mun.)				22.00 w.	18.00 w.
Hamilton (Sta.-Mun.)					12.00 w.
Lima (Sta.-Mun.)	2.00 d.			75.00 m.	40.00 m.
Mansfield (Sta.-Mun.)	8.00–10.00 w.		.15–.25 h.	85.00 m.	65.00 m.
Marietta (Sta.-Mun.)					
Marion (Sta.-Mun.)				75.00-85.00 m.	30.00–50.00 m.
Portsmouth (Sta.-Mun.)				60.00 m.	
Sandusky (Sta.-Mun.)			6.00 up w.	100.00 m.	10.00 w.
Springfield (Sta.-Mun.)				75.00–100.00 m.	50.00–80.00 m.
Steubenville (Sta.-Mun.)				125.00 m.	15.00 w.
Tiffin (Sta.-Mun.)					
Toledo (Sta.-Mun.)	2.00 d.		8.00 w.		50.00 m.
Washington C. H. (Sta.-Mun.)					
Youngstown (Sta.-Mun.)				100.00 m.	75.00 m.
Zanesville (Sta.-Mun.)	13.00 w.		.25 h.	20.00 w.	15.00 w.

[1] And board and room.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Structural-iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
.....	.....	$10.00 w.	$8.00 w.	$0.35 h.	$0.30 h.
.....	.....	.....	$5.00-7.00 w.	$0.30-.55 h.	$1.50-2.50 d.
$0.80 h.	$10.00-15.00 w.	.....	.....	.35-.40 h.	2.00 d.
.80 h.	12.00-15.00 w.	[1] 11.00 w.	[2] 9.00 w.	.35 h.	.25 h.
.....	.....	.....	[2] 6.00 w.	.35 h.	.25 h.
.....	.....	.....	6.00-7.00 w.	.30-.35 h.	.25 h.
$5.00-7.00 d.	8.00-10.00 w.	9.00 w.	7.00-8.00 w.	.35-.40 h.	.25-.30 h.
.....	.....	12.00 w.	8.00 w.	.35 h.	.25 h.
.....	$1.40 d.	2.50 d.	1.50 d.	.40 h.	.30 h.
.....	.....	.....	.....	.30 h.	.25 h.
.....	.....	.....	.....	.....	.....
.....	.....	18.00 w.	25.00-35.00 m.	.40 h.	.30 h.
.45-.55 h.	40.00-50.00 m.	16.00 w.	8.00-12.00 w.	.30-.35 h.	.30-.35 h.
.....	.....	.....	8.00 w.	.35 h.	1.75 d.
.62½ h.	.....	.....	18.00 w.	.35 h.	.25 h.
.....	.....	.....	.....	.....	.....
5.80 d.	30.00-65.00 m.	14.00 w.	5.00-8.00 w.	0.30 h.	.25 h.
.....	7.00-9.00 w.	$8.00-12.00 w.	5.00-10.00 w.	2.50 d.	1.50 d.
.....	.....	.....	1.10 d.	.35 h.	1.00 d.
.....	.....	.....	14.00 w.	.....	.....
7.00 d.	50.00 m. and up.	4.00 d.	3.00 d.	3.00 d.	2.00 d.
.....	.....	.....	.....	.....	.....
.....	10.00 w.	.....	8.00 w.	.35 h.	.25 h.
.....	.....	[1] 2.00 d.	[1] 2.00 d.	.35 h.	.35 h.
.....	.....	.....	.....	.....	.....
.....	.....	40.00-60.00 m.	15.00-20.00 m.	.30-.35 h.	1.85-2.00 d.
.....	.....	.....	6.00-7.00 w.	.30 h.	.25 h.
.....	.....	.....	.....	[1] 50.00 m.	.....
.70 h.	8.00 w.	[1] 12.00 w.	5.00 w.	.25 h.	1.75 d.
$0.68-.75 h.	12.00 w.	6.00-12.00 w.	6.00-12.00 w.	.30-.40 h.	2.00 d.
.....	10.00 w.	10.00 w.	6.00 w.	.35 h.	1.75-2.10 d.
.58 h.	10.00 w.	[1] 60.00 m.	20.00 m.	3.00 d.	2.00 d.
5.00 d.	12.00 w.	12.00 w.	10.00 w.	.30 h.	.25 h.
5.00 d.	12.00-15.00 w.	40.00 m.	8.00-10.00 w.	3.00 d.	2.00 d.
.....	8.00-12.00 w.	.....	7.00-8.00 w.	.30 h.	1.75-2.00 d.
.....	8.00-10.00 w.	.....	6.00-9.00 w.	.30 h.	2.00 d.
.50 h.	9.00 w.	15.00 w.	8.00 w.	.35 h.	.25 h.
.....	.....	.....	.....	.30 h.	.....
.60-.70 h.	8.00 w.	10.00-14.00 w.	8.00-10.00 w.	.40 h.	.25-.30 h.
.....	10.00 w.	20.00 w.	1.00 d.	.30 h.	1.50 d.
.50 h.	50.00 m.	30.00 m.	1.00 d.	.30 h.	.20 h.
.80 h.	10.00 w.	10.00-12.00 w.	7.00-8.00 w.	2.50 d.	2.00 d.
.70 h.	.....	[1] 15.00-18.00 w.	9.00-12.00 w.	.35-.40 h.	.25 h.
.....	12.50 w.	.....	.....	.30-.35 h.	1.50-2.00 d.
.....	.....	50.00 m.	.....	.35 h.	2.10 d.
.....	.....	.....	.....	.30 h.	1.25 d.
.50 h.	.19 h.	14.00 w.	6.00 w.	.....	.....
.70 h.	35.00-50.00 m.	12.00 w.	10.00 w.	.35-.40 h.	.25 h.
.....	.....	.....	4.00-6.00 w.	.25-.30 d.	1.25 d.
.....	.....	.....	25.00 m.	.35 h.	.25 h.
.....	32.00 m.	.....	6.00 w.	.30 h.	.25 h
.....	.....	.....	1.00 d.	.40 h.	.20-.25 h.
.....	7.00-10.00 w.	12.00-18.00 w.	6.00 w.	.30 h.	1.50 d.
.80 h.	.....	7.00 w.	7.00 w.	3.00 d.	2.00 d.
.....	.....	12.00 w.	.....	2.50 d.	.....
.75 h.	.....	[1] 14.00 w.	[1] 8.00 w.	.35-.40 h.	.25 h.
.....	.....	.....	.....	2.25 d.	1.50 d.
.60 h.	10.00 w.	50.00 m.	8.00 w.	.35 h.	.25 h.
.....	6.00 w.	15.00 w.	8.00 w.	.....	.....

[2] And board.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Blacksmiths.	Boiler makers.	Bricklayers.	Carpenters.	Cleaners and scrubbers, female.
Oklahoma:					
Enid (Sta.)	$0.50 h.	$0.50 h.	$1.06 h.	$0.60 h.	$0.20 h.
Muskogee (Sta.)				[1] 6.00 d.	5.00 w.
Oklahoma City (Fed.-Sta.)					.20 h.
Tulsa (Sta.)				6.00 d.	
Oregon:					
Astoria					
Portland (Fed.-Mun.)	5.77½ d.	5.77½ d.	7.00 d.	5.60 d.	$2.80 3.20 d.
Pennsylvania:					
Erie (Sta.)	.45 h.		.75 h.	.55 h.	
Harrisburg (Sta.)	$0.35-.45 h.	$0.35-.45 h.	$0.65-.75 h.	.62½ h.	1.50 d.
Johnstown (Sta.)	.42 h.		.70 h.	.55 h.	[2] 1.50 d.
Philadelphia (Fed.)				.70 h.	1.50-2.00 d.
Philadelphia (Sta.)	.66 h.	.66 h.	.75 h.	.65 h.	6.00 w.
Pittsburgh (Fed.)	.75 h.	.45-.50 h.	.75 h.	.71 h.	1.50-2.00 d.
Pittsburgh (Sta.)	.55-.65 h.	.55-.65 h.	.60-.75 h.	$0.50-.75 h.	.22-.25 h.
Scranton (Sta.)	3.75 d.		.80 h.	.70 h.	1.50 d.
York (Sta.)					
Rhode Island:					
Providence (Fed.)		.47-.60 h.		.60 h.	
Providence (Sta.)	.40-.60 h.	.47-.60 h.		.55 h.	.20-.25 h.
South Carolina:					
Charleston (Fed.)				3.50 d.	
Tennessee:					
Memphis (Fed.)	.56½ h.		0.81¼ h.	.55 h.	
Texas:					
Dallas (Mun.)	4.80 d.			6.00 d.	2.00 d.
El Paso (Fed.)	5.75 d.			4.00 d.	
Fort Worth (Fed.)	.55 h.	.55 h.	.85 h.	.72½ h.	.30 h.
Fort Worth (Mun.)	.70 h.	.80 h.	.80 h.	.30-.70 h.	
Galveston (Fed.)		.56 h.		.55 h.	
Houston (Fed.-Mun.)				.50 h.	1.00 d.
San Antonio (Fed.)	3.00 d.				
Utah:					
Salt Lake City (Fed.)		5.50 d.		6.00 d.	2.00 d.
Virginia:					
Norfolk (Fed.)			.75 h.	.53-.58 h.	
Washington:					
Aberdeen (Fed.)				6.60 d.	
Bellingham (Fed.-Mun.)				.75 h.	.30 h.
Everett (Mun.)	5.50 d.	5.60 d.	7.00 d.	5.60 d.	
Seattle (Fed.)	5.77½ d.	5.77½ d.		6.60 d.	
Seattle (Mun.)	5.00-6.00 d.		.75 h.	5.00-6.00 d.	.30-.40 h.
Spokane (Fed.)	5.50 d.	6.00 d.	7.00 d.	6.60 d.	.35 h.
Spokane (Mun.)	5.00 d.			.62½ h.	
Tacoma (Fed.-Mun.)	5.50 d.	6.00 d.		6.60 d.	.35 h.
Walla Walla (Fed.)					
Yakima (Fed)				5.00 d.	.30-.35 h.
Wisconsin:					
La Crosse (Sta.-Mun.)					.20-.25 h.
Milwaukee (Fed-Sta.-Mun)	.50 h.	.47½-.59 h.	.62½ h.	.50-.55 h.	.25 h.
Oshkosh (Sta.-Mun.)					.25 h.
Superior (Sta.-Mun.)	5.00 d.	5.00 d.	.80 h.	.60 h.	2.00 d.
Wyoming:					
Cheyenne (Fed.-Sta.)				.60-.75 h.	

[1] For 8 hours. [2] And board and room.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Cooks, male.	Cooks, female.	Drivers, teamsters, etc.	Dock laborers.	Farm hands.	Hod carriers.
$12.00–15.00 w.	$7.00–10.00 w.	$3.00 d.	.....	$25.00–35.00 m.	$0.40 h.
16.00 w.	10.00 w.	3.00 d.	.....	30.00 m.	.....
100.00 m.	8.00 w.	2.50 d.	.....	35.00 m.	.....
100.00 m.	.....	.35 h.	.....	.....	.....
.....	.....	.....	.....	.....	.....
4.50 d.	3.75 d.	4.00 d.	$0.80 h.	60.00 m.	4.50 d.
10.00 w.	.....	.40 h.	.45 h.	80.00 m.	.....
15.00–18.00 w.	6.00–15.00 w.	15.00 w.	.38½ h.	25.00–35.00 m.	.35 h.
[2] 75.00 m.	[2] 65.00 m.	70.00 m.	.....	[2] 1.50 d.	.....
75.00–90.00 m.	10.00–12.00 w.	.....	.....	.....	.....
75.00 m.	7.50 w.	17.00 w.	.32½ h.	35.00 m.	.45 h.
16.00–30.00 w.	10.00–18.00 w.	2.00–3.50 d.	.....	25.00–40.00 m.	.50 h.
15.00–20.00 w.	[2] 30.00–45.00 m.	$16.00–20.00 w.	.....	[2] 30.00–45.00 m.	$0.40–.50 h.
20.00 w.	8.00 w.	15.00 w.	.....	25.00 m.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	35.00–40.00 m.	.38 h.
8.00–16.00 w.	6.00–10.00 w.	8.00–14.00 w.	.....	30.00–35.00 m.	.....
.....	.....	.....	.30 h.	.....	.....
[2] 80.00 m.	5.00 w.	.....	.....	30.00 m.	.37½ h.
65.00 m.	10.00 w.	.....	.....	35.00 m.	.....
.....	.....	.....	.....	30.00 m.	.....
100.00 m.	75.00 m.	3.00 d.	.....	35.00 m.	.60 h.
75.00–100.00 m.	50.00–75.00 m.	1.50 d.	.....	30.00–35.00 m.	.....
88.00 m.	.....	.....	.40 h.	[2] 25.00–45.00 m.	.....
75.00 m.	1.25 d.	2.25 d.	.....	[3] 1.00 d.	.....
15.00 w.	.....	.....	.....	[2] 6.00 w.	.....
90.00 m.	.....	3.50 d.	.....	60.00 m.	.....
18.00–30.00 w.	8.00–12.00 w.	15.00–20.00 w.	.30–.35 h.	1.00–1.50 d.	.45 h.
.....	.....	.....	.....	.....	.....
75.00–100.00 m.	45.00–60.00 m.	3.50 d.	.....	50.00–65.00 m.	.....
75.00–150.00 m.	30.00–50.00 m.	3.75–4.00 d.	.65–.85 h.	60.00–80.00 m.	5.00 d.
100.00 m.	60.00 m.	75.00 m.	.55 h.	60.00 m.	.....
75.00–150.00 m.	40.00–100.00 m.	3.75–4.00 d.	.50–.65 h.	[3] 50.00–85.00 m.	$4.00–4.50 d.
80.00 m.	45.00 m.	85.00 m.	.....	65.00 m.	4.50 d.
90.00 m.	.....	3.50 d.	.....	60.00–65.00 m.	.....
100.00 m.	60.00 m.	4.00 d.	.75 h.	60.00 m.	5.00 d.
4.00 d.	1.50–2.00 d.	3.25 d.	.....	2.50 d.	.....
80.00 m.	75.00 m.	[3] 2.50 d.	.....	[3] 60.00 m.	.....
.....	.....	.....	.....	.....	.....
75.00 w.	12.00 w.	18.00 w.	.....	45.00 m.	.45 h.
.....	6.00 w.	18.00 w.	.....	50.00 m.	.....
40.00–125.00 m.	25.00–75.00 m.	3.00 d.	.36 h.	45.00 m.	.35 h.
[2] 50.00 m.	.....	3.00 d.	.....	[2] 40.00–60.00 m.	.....

[3] And board.

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, kind of office.	House servants.	Inside wiremen.	Laborers.	Laundry operators, male.	Laundry operators, female.
Oklahoma:					
Enid (Sta.)	$4.00–6.00 w.	$15.00 w.	$0.30 h.	$14.00 w.	$1.00 d.
Muskogee (Sta.)	5.00 w.	3.00–4.00 d.			
Oklahoma City (Fed.-Sta.)	6.00 w.		.30 h.		8.00 w.
Tulsa (Sta.)	6.00 w.		.37½–.40 h.		
Oregon:					
Astoria (Fed.)			3.50 d.		
Portland (Fed.-Mun.)	35.00 m.	5.77½ d.	.40 h.	25.00 w.	15.00 w.
Pennsylvania:					
Erie (Sta.)			.40 h.		
Harrisburg (Sta.)	5.00–10.00 w.	.25–.35 h.	.30 h.	12.00–15.00 w.	6.00 w.
Johnstown (Sta.)	5.00 w.		.30–.35 h.	18.00 w.	6.00 w.
Philadelphia (Fed.)	8.00–10.00 w.		.30–.39 h.		30.00–40.00 m.
Philadelphia (Sta.)	7.00 w.	.50 h.	.35 h.		6.50 w.
Pittsburgh (Fed.)	5.00–9.00 w.	15.00–20.00 w.	.33–.40 h.	8.00–18.00 w.	5.00–15.00 w.
Pittsburgh (Sta.)	20.00–30.00 m.	.40–.45 h.	.33–.35 h.		
Scranton (Sta.)	6.00 w.		.30 h.		
York (Sta.)			2.25–2.50 d.		
Rhode Island:					
Providence (Fed.)			.24–.50 h.		
Providence (Sta.)			.32–.40 h.		
South Carolina:					
Charleston (Fed.)			1.75 d.		
Tennessee:					
Memphis (Fed.)	4.00 w.	.56¼ h.	.30 h.		7.50 w.
Texas:					
Dallas (Mun.)	6.00 w.		2.50 d.		
El Paso (Fed.)	1.00 d.		2.00 d.		
Fort Worth (Fed.)		.85 h.	.30 h.		
Fort Worth (Mun.)	6.00 w.		.25 h.		
Galveston (Fed.)	[1] 15.00 m.		.25–.32½ h.		
Houston (Fed.-Mun.)	5.00 w.		2.00 d.		1.00 d.
San Antonio (Fed.)			2.00 d.		
Utah:					
Salt Lake City (Fed.)	10.00 w.		.45 h.		
Virginia:					
Norfolk (Fed.)	7.00 w.	.60–.62½ h.	.30 h.	12.00–18.00 w.	6.00–12.00 w.
Washington:					
Aberdeen					
Bellingham (Fed.-Mun.)	4.00–6.00 w.		.40–.50 h.		
Everett (Mun.)			3.60–4.50 d.	2.00–2.40 d.	90.00–100.00 m.
Seattle (Fed.)	40.00 m.		3.57½ d.		
Seattle (Mun.)	20.00–60.00 m.	.60–.75 h.	3.25–4.80 d.	18.00–25.00 w.	9.00–15.00 w.
Spokane (Fed.)	30.00 m.	6.50 d.	3.50 d.	21.00 w.	13.00 w.
Spokane (Mun.)			3.50 d.		
Tacoma (Fed.-Mun.)	30.00 m.		4.00 d.		
Walla Walla (Fed.)	30.00 m.		.40 h.		
Yakima (Fed.)	7.00 w.		3.25–3.50 d.		
Wisconsin:					
La Crosse (Sta.-Mun.)	4.00–6.00 w.		.25–.30 h.		7.00 w.
Milwaukee (Sta.-Co.-Mun.)	2.00–9.00 w.	.40 h.	.35 h.		8.00 w.
Oshkosh (Sta.-Mun.)	5.00 w.				
Superior (Sta.-Mun.)	3.00–7.00 w.	.50 h.	.35 h.	3.00 d.	
Wyoming:					
Cheyenne (Fed.-Sta.)			2.25–2.50 d.		

[1] And board and room.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Continued.

Plumbers.	Plasterers	Painters.	Molders.	Machinists.	Saleswomen.
$0.57 h.	.....	$0.50 h.	$0.75 h.	$0.75 h.	$6.00–10.00 w.
.....	.....	.....	.....	.....	.....
.....	.....	.60 h.	.....	.....	1.00 d.
.50 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
5.77½ d.	$5.00 d.	5.50 d.	7.00 d.	5.77½ d.	15.00 m.
.40–.65 h.	.47 h.	.....	.....	.....	.....
.45–.55 h.	.35–.45 h.	.50 h.	.60 h.	.57½–.50 h.	8.00 w.
.65–.75 h.	.....	.....	.....	.....	8.00 w.
.62 h.	.72½ h.	.55 h.	.70 h.	.56 h.	.....
.55–.75 h.	.60–.75 h.	.67½ h.	.75 h.	.55 h.	10.00–18.00 w.
.50–.65 h.	5.00–5.50 d.	.55–.60 h.	.55 h.	.60–.70 h.	12.00–17.00 w.
.42 h.	.....	.70 h.	.....	.70 h.	8.00 w.
.....	.....	.....	.....	4.00 d.	.....
.47–.60 h.	.....	.....	.....	.....	.....
.42–.60 h.	.....	.....	.....	.....	.....
.....	.....	.....	.....	.60 h.	.....
.60 h.	.....	.45 h.	.75 h.	.75 h.	.....
.52½ h.	.....	5.80 d.	.....	.....	.....
5.75 d.	.....	.....	.....	.....	.....
.55 h.	.55 h.	.65 h.	.85 h.	.85 h.	.....
.75 h.	.....	.55 h.	.....	.80 h.	.....
.56 h.	.....	.....	.....	.....	.....
.50 h.	.....	.....	.....	.....	.....
5.80 d.	.....	.....	.....	.....	.....
5.50 d.	.....	4.50 d.	.....	.....	.....
.55–.72½ h.	.60–.72½ h.	3.50 d.	.....	.50–.60 h.	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.53½ h.	6.60–7.10 d.	5.20 d.	7.00 d.	6.50 d.	41.00 up m.
5.77½ d.	5.77½ d.	.....	.....	5.77½ d.	.....
6.00–6.50 d.	.....	5.00–5.50 d.	.75 h.	6.00–7.00 d.	.....
6.00 d.	6.00 d.	6.00 d.	6.50 d.	6.00 d.	12.00 w.
.....	6.00 d.	.....	.....	.....	.....
.....	.....	5.50 d.	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.45 h.	.45 h.	.45 h.	.55 h.	.67½ h.	8.00 up w.
.....	.....	.29½ h.	.....	.....	.....
.60–.72½ h.	4.50 d.	.50 h.	.70 h.	.70 h.	.....
.55 h.	.....	.....	.....	.....	.....

RATES OF WAGES PAID TO WORKERS PLACED IN EMPLOYMENT BY

State, city, and kind of office.	Seamstresses.	Sewing machine operators, male.	Sewing machine operators, female.	Stenographers, male.	Stenographers, female.
Oklahoma:					
Enid (Sta.)	$8.00 w.			$65.00 m.	$50.00-65.00 m.
Muskogee (Sta.)					
Oklahoma City (Fed.-Sta.)				15.00 w.	12.00 w.
Tulsa (Sta.)				100.00 m.	85.00 m.
Oregon:					
Astoria (Fed.)					
Portland (Fed.)	10.00 w.		$10.00 w.	100.00 m.	75.00 m.
Pennsylvania:					
Erie (Sta.)				20.00 w.	12.00 w.
Harrisburg (Sta.)	8.00 w.		10.00-20.00 w.	18.00-25.00 w.	12.00 w.
Johnstown (Sta.)	1.50-2.00 d.			75.00 m.	45.00 m.
Philadelphia (Fed.)	2.00 d.		12.00-44.00 w.	18.00-25.00 w.	
Philadelphia (Sta.)				80.00 m.	16.00 w.
Pittsburgh (Fed.)	2.00 d.			18.00-40.00 w.	15.00-25.00 w.
Pittsburgh (Sta.)				80.00-100.00 m.	50.00-75.00 m.
Scranton (Sta.)				15.00 w.	10.00 w.
York (Sta.)					
Rhode Island:					
Providence (Fed.)					
Providence (Sta.)					
South Carolina:					
Charleston (Fed.)		$1.04 d.			15.00 w.
Tennessee:					
Memphis (Fed.)	2.00 d.			125.00 m.	75.00 m.
Texas:					
Dallas (Mun.)				75.00 m.	60.00 m.
El Paso (Fed.)					
Fort Worth (Fed.)				125.00 m.	125.00 m.
Fort Worth (Mun.)				75.00-100.00 m.	60.00-90.00 m.
Galveston (Fed.)					
Houston (Fed.-Mun.)	1.25 d.		1.50 d.		90.00 m.
San Antonio (Fed.)					
Utah:					
Salt Lake City (Fed.)	40.00 m.			100.00 m.	
Virginia:					
Norfolk (Fed.)		7.00-12.00 w.	8.00 w.	80.00-100.00 m.	60.00-90.00 m.
Washington:					
Aberdeen (Fed.)					
Bellingham (Fed.-Mun.)					
Everett (Mun.)				75.00-100.00 m.	60.00-75.00 m.
Seattle (Fed.)					
Seattle (Mun.)	12.00-14.00 w.			90.00-125.00 m.	
Spokane (Fed.)	14.00 w.	21.00 w.	14.00 w.	85.00 m.	60.00 m.
Spokane (Mun.)					
Tacoma (Fed.-Mun.)					
Walla Walla (Fed.)					
Yakima (Fed.)					
Wisconsin:					
La Crosse (Sta.-Mun.)					
Milwaukee (Sta.-Co.-Mun.)			7.00 up. w.	75.00 m.	8.00 up. w.
Oshkosh (Sta.-Mun.)					7.00 w.
Superior (Sta.-Mun.)				50.00-125.00 m.	10.00-25.00 w.
Wyoming:					
Cheyenne (Fed.-Sta.)				100.00 m.	85.00-90.00 m.

[1] And board.

EMPLOYMENT OFFICES IN THE UNITED STATES, APRIL, 1918—Concluded.

Structural iron workers.	Telephone operators (switchboard), female.	Waiters.	Waitresses.	Casual workers, male.	Casual workers, female.
.....	$1.00 d.	$7.00 w.	$7.00 w.	$0.30 h.	$0.25 h.
.....	.....	14.00 w.	8.00 w.	.30 h.	1.00 d.
.....	.....	30.00 m.	1.00 d.	.30 h.	.20 h.
.....	.....	.....	8.00 w.	.35 h.	.25 h.
.....	.....	.....	.....	.....	.....
$6.00 d.	12.00–14.00 w.	20.00 w.	16.00 w.	.40 h.	.35 h.
.60 h.	.....	.....	.....	.25 h.	.17½ h.
.35–.45 h.	9.00 w.	5.00–7.00 w.	5.00 w.	.25 h.	1.50 d.
.....	.....	[1] 7.00 w.	[1] 5.00 w.	.30 h.	1.25–1.50 d.
.....	7.50–9.00 w.	50.00–55.00 m.	15.75–50.00 m.	.....	1.50–2.00 d.
.70 h.	10.00 w.	.....	6.00 w.	2.00 d.	1.50 d.
.45–.55 h.	12.00–15.00 w.	12.00–15.00 w.	10.00–12.00 w.	.25–.30 h.	2.10 d.
.50–.65 h.	7.50–9.50 w.	[2] 12.00–15.00 w.	[1] 6.00–10.00 w.	.....	.....
.....	7.00–10.00 w.	25.00 m.	5.00–6.00 w.	2.50 d.	1.50 d.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	3.00–7.00 d.	.....
.....	.....	.....	.....	.20–.25 h.	.20–.25 h.
.....	1.50 d.	.....	.....	.....	.....
.75 h.	45.00 m.	50.00 m.	.....	.20 h.	.....
.....	.....	.....	35.00 m.	2.00 d.	2.00 d.
.....	.....	.....	.....	.....	.....
.60 h.	.....	.....	.....	.....	.....
.....	.....	.....	35.00–40.00 m.	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	8.00 w.	8.00 w.	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	40.00 m.	.35 h.	.25 h.
.75 h.	8.00–10.00 w.	15.00 w.	7.00–10.00 w.	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	8.00–12.00 w.	.50 h.	.35 h.
.....	.....	.....	15.00 w.	.45 h.	2.50 d.
.....	.....	17.00 w.	12.00 w.	.....	.....
.....	45.00 m.	15.00–18.00 w.	10.00–15.00 w.	.40–.50 h.	.30–.35 h.
.....	13.00 w.	18.00 w.	13.00 w.	.35 h.	.35 h.
.....	.....	.....	.....	.35 h.	.....
.....	.....	.....	12.50 w.	.50 h.	.35 h.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.35–.40 h.	.30–.35 h.
.....	.....	.....	.....	.30–.35 h.	.20–.25 h.
.....	.....	.....	6.00 w.	.35 h.	.25 h.
.....	.....	.....	.....	.25 h.	.25 h.
.68¾ h.	.....	6.00–15.00 w.	6.00–15.00 w.	.35 h.	2.40 d.
.....	.....	.....	.....	[3] 2.00 d.	.....

[1] And board and room.

CHANGES IN UNION WAGE SCALES AND IN RETAIL PRICES OF FOOD, 1907 TO 1917.

Summarized figures concerning the changes in recent years in union wage scales, drawn from a report prepared by the Bureau of Labor Statistics, are here presented in comparison with like figures relating to retail prices of food. The statements are given in the form of index numbers (percentages) in which the figures for each other year are compared with the figures for 1913; in other words, 1913 is made the base or 100 per cent.

For all trades covered in the report, taken collectively, the average rate of wages per hour in May, 1917, was 114 per cent of the average in May, 1913; that is, the average rate in 1917 was 14 per cent higher than in 1913. In 1907 the average hourly rate was but 90 per cent of what it was in 1913; thus the average hourly rate had increased between 1907 and 1917 in the ratio of 90 to 114, an increase of 24 points in the index, which number, 24, is 27 per cent of 90, making the increase in the rate of wages per hour between 1907 and 1917, 27 per cent. The wage figures are for May of each year.

INDEX NUMBERS OF UNION WAGE RATES AND HOURS OF LABOR, AND OF RETAIL PRICES OF FOOD, 1907 TO 1917.

(1913=100.)

Year.	Rates of wages per hour.	Full-time hours per week.	Rates of wages per week, full time.	Retail prices of food.
1907	90	103	92	82
1908	91	102	93	84
1909	92	102	93	89
1910	94	101	95	93
1911	96	101	96	92
1912	98	100	98	98
1913	100	100	100	100
1914	102	100	102	102
1915	103	99	102	101
1916	107	99	106	114
1917	114	98	112	146

The index numbers for full-time hours per week decreased gradually from 103 in 1907 to 98 in 1917. It should be borne in mind that these figures are percentages based on the year 1913, not concrete hours.

Because of the reduction in hours there was not as great a relative change in the index numbers for rates of wages per week as in rates of wages per hour, the increase being from 92 in 1907 to 112 in 1917, or 23 per cent as computed from the original figures extended to two decimal places.

A far greater change took place in retail prices of food; between 1913 and 1917 the increase was 46 per cent, and between 1907 and 1917 it was 78 per cent. The figures are based on yearly averages.

From the same basic data a second table has been prepared indicating the change in the purchasing power of an hour's wages and of a week's wages from 1907 to 1917.

INDEX NUMBERS OF PURCHASING POWER OF UNION WAGES AS MEASURED IN FOOD, 1907 TO 1917.

(1913=100.)

Year.	Purchasing power measured by retail prices of food—	
	Of rates of wages per hour.	Of rates of wages per week, full time.
1907	109	112
1908	108	110
1909	104	105
1910	102	102
1911	104	105
1912	100	100
1913	100	100
1914	100	99
1915	101	101
1916	94	93
1917	78	77

In the table it is shown that an hour's wages in 1917 purchased but 78 per cent as much food as in 1913, and a week's wages but 77 per cent as much. As compared with 1907 an hour's wages in 1917 bought but 71 per cent as much food, and a week's wages but 69 per cent as much food.

WORK OF THE AGRICULTURAL WAGES BOARD OF ENGLAND.

[From The Labour Gazette, London, April, 1918, p. 135.]

The Agricultural Wages Board, established for England and Wales under the Corn Production Act of 1917, have given notice that they propose to fix minimum time rates of wages for male workers of 18 years of age and over in Norfolk and in Northamptonshire, on the basis of a minimum rate of 30s. [$7.30] for 54 hours (exclusive of meal times) in respect of the period commencing on the first Monday in March and terminating on the last Sunday in October, and of a minimum rate of 30s. for 48 hours (exclusive of meal times) in respect of the remaining period of the year. The wages board, as required by the corn production act, will consider any objections to the above rates which may be lodged with them within one month from the date of the notice (Apr. 2), and no minimum rates can be actually fixed by the wages board before the expiration of the month's interval allowed for objections.

Having regard to the fact that it is not possible for all the district wages committee, established or to be established by the wages board, at once to meet and settle the recommendations they wish

to make regarding minimum rates of wages applicable to their areas, the wages board have expressed the opinion that by mutual agreement between employers and workers it is desirable that any minimum rates which may be fixed should be made retrospective as from the end of March.

On March 28 the board considered a report from the committee on "cottage rents," relating to the basis on which it is suggested that recommendations should be made by district wages committees as to minimum rates of wages, so far as these are affected by the question of the value of cottage rents. The committee expressed the view that a worker should be in a position, should he so desire, to provide himself with a proper and reasonable standard of accommodation for himself and his family, and that any minimum rates fixed for adult male workers should accordingly be such as will enable an "economic rent" for such standard of accommodation to be paid by the worker. The standard laid down by the committee includes a five-room dwelling in a proper state of repair, provided with satisfactory sanitary arrangements and with an adequate water supply, together with garden ground of not less than one-eighth of an acre, and they have suggested, for the guidance of district committees, how the "economic rent" of such standard accommodation may be calculated in relation to the circumstances of any particular district. The wages board adopted the report and decided to forward it to the various district wages committees as they are established.

Sir Henry Rew presented the final report from the committee on "allowances," which was appointed to consider and report upon the general principles which should be adopted as a basis for determining the value of allowances or benefits (other than cottages supplied to workers, which subject is referred to the "cottage rents" committee), which may be reckoned in part payment of wages. The committee reported that while, in their opinion, payment of wages wholly in cash should be adopted, so far as possible, as a general principle, it appeared from evidence which had been placed before them that any attempt to abolish all allowances in kind would, in view of the difficulties connected with the supply and distribution of food at the present time, be unwise. They recommended that a general order be made by the wages board defining milk and potatoes as allowances which may be reckoned as part payment of wages in lieu of payment in cash for the purpose of any minimum rates of wages fixed under the corn production act, and defining the value at which these commodities should be so reckoned as the current wholesle price in the district—in the case of potatoes—such price to be reckoned as the price at the time the main crop potatoes are lifted, the actual price to be settled on this basis from time to time by the district wages

committees for their districts. The report was approved and adopted, and the wages board decided, on the recommendation of the committee, to invite the various district wage committees to report upon the question of defining any other allowances in addition to milk and potatoes in their districts. The board decided similarly to invite the district wages committees, in whose areas the provision by the employer to his workers of board and lodging or of meals is prevalent, to consider and report upon the question of the manner in which these forms of allowances should be dealt with under the act.

MINIMUM WAGE.

HEARINGS ON THE MINIMUM WAGE BILL FOR THE DISTRICT OF COLUMBIA.

Hearings on the Trammell-Keating bill to create a minimum wage commission in the District of Columbia were held before committees of the Senate and House of Representatives on April 16 and April 17. The most striking feature of these hearings was the lack of opposition to the bill or to the principle of minimum-wage determination for women and child employees. Mr. Charles J. Columbus, representing the Merchants and Manufacturers' Association of the District, stated that his association was not only "absolutely unopposed" to the proposed bill but was actively in favor of it. This association, Mr. Columbus explained, represents practically all the larger employers in the city of Washington, notably the department stores.

Arguments in favor of the proposed legislation were made by prominent representatives of employers, employees, and the public. Hon. Royal Meeker, United States Commissioner of Labor Statistics, presented the results of a study of cost of living of wage-earning women in the District of Columbia. Mr. Edward A. Filene, of the Filene department store of Boston, urged that a minimum wage, fixed at a level permitting of good living, was financially profitable to the employer himself. Miss Mary O'Sullivan, formerly a department-store employee in the District of Columbia, gave a vivid sketch of her difficulties in supporting herself on a $7 a week wage.

Other speakers were: Mr. Felix Frankfurter; Representative Richard Olney, of Massachusetts; Arthur N. Holcombe, member of the Massachusetts Minimum Wage Commission; Dr. W. C. Woodward, health commissioner of the District of Columbia; Rev. John A. Ryan, of the Catholic University; Mrs. Newton D. Baker; Commissioner Louis Brownlow, of the District of Columbia; Mrs. Frances Axtell, of the United States Employees' Compensation Commission, formerly member of the Retail Store Wage Board of Washington State; Miss Julia O'Connor, president of Massachusetts Telephone Operators' Union and member of two Massachusetts wage boards.

The bill as introduced follows the general lines of the Oregon minimum wage law, which has been upheld as constitutional by the United States Supreme Court. It provides for a commission of 3

members, appointed by the Commissioners of the District of Columbia. This commission is to investigate and if it finds that the wages of women and minors in any occupation are, in its opinion, too low for decent living, it is to call a conference of the interested parties in the occupation to decide upon a suitable minimum wage.

The bill was introduced into the Senate by Senator Park Trammell of Florida and into the House of Representatives by Congressman Edward Keating of Colorado.

THE RETAIL STORE AND THE MINIMUM WAGE FOR WOMEN.

[Extracts from a statement of Mr. Edward A. Filene, of Wm. Filene's Sons Co. (department store), of Boston, Mass., before the Senate committee at the hearing on the District of Columbia minimum wage bill, Apr. 17, 1918.]

A curious thing about the hearings on minimum wage as I have read them—because I have not been to many—is that it has always been a plea for the workpeople. Now, we bosses get just as much from the minimum wage as our people do, because a $5-a-week girl makes a cheap boss. That is literally true. You can not get real organization out of people who are unintelligent, and people can not be intelligent who have not enough to live properly on.

A working girl, worried about paying for her clothing and lodging, is not going to be very ambitious, you know, to heed the preachments that we bosses put onto her—burden her with. She is not, as a rule, going to have the ambition to try to learn how to earn more money. She is not going to try to do it, or if she does try she fails.

Now, when you get to where the hard pressure of mere living—clothing and food and shelter—disappears, then you can come to a point where the possibility of more intelligent action, more intelligent study, more comprehension of retail distribution, of the work they have got to do, is possible, and I might as well confess very frankly that retail distribution is about as lawless a thing as there is in the country; I mean, from an economic standpoint. The average thing that we handle doubles in price by the time it reaches the consumer; and sometimes, as I said yesterday, when I hear stories about our fine store, I think how many kinds of a hypocrite my associates and I must be.

The fact that the average thing doubles in price before it reaches the hands of the consumer is a shame and a disgrace, and those of us who give our lives to it ought to be making greater progress with the remedies. If we do not make greater progress, direct distribution from producer to consumer will come—through the parcel post, and so forth—and it ought to come if we have not any greater inventive genius and no sense of our responsibility and power. The source of

our power is in our employees. Now, the average employer is using the greater part of his time and the most of his energy in trying to keep things running smoothly between himself and his employees—between his employees and his executives; and that is due not to viciousness of the employee force, not to ill will, but simply to an underpaid, badly nourished, unintelligent group of employees; and all these things are due to the fact that we have not realized that the better the wages the better we in the management are off; because, finally, as has been stated by Dr. Holcombe, even the best of employees are dependent in large degree upon the freedom and foresight and vision of the executive if they are really to make the best out of conditions; and when the executives do think and do plan, and when the employees have wages enough so that they will not be entirely taken up with the questions of food, of clothing, and of shelter, which is just as if you were feeding to a steam engine coal all the time, and it did nothing but make steam and never turned a wheel—that is what we are doing with our employees—when we get to that point, then it becomes true that the better we pay the cheaper the cost of selling becomes; and that is so true in a store like ours that it definitely costs us half as much in percentage to sell the amount of goods which gets a bonus for the sales people than the first cost of their regular wages.

I do not know whether that is very clear. Let me explain. Everybody who sells goods in our store is told when they come in—suppose they come in at $12, then they are told that it costs us about 4 per cent. "If you can sell $300, then you will have paid for your salary, and for rent, and will have given us a fair return on our capital—if you sell $300 a week. Now, on whatever you sell above $300, we will give you 2 per cent, and we will be just 2 per cent better off than on the first $300 you sell"; and as a result of that, and so clearly is that understood that it is for our advantage as well as for the advantage of our employees, that very frequently a salesgirl will say to me, "I earned $5 extra this week," or "I earned $8 extra this week, Mr. Filene."

That is something to boast of, because even when they do make extra money in many of the stores they are afraid to talk about that because they think that if the employers think that the wages are high they will be leveled down again; but our people have learned that we are getting more out of the extra money that we pay them as bonuses, and the bonus is defined simply as an extra reward for extra good results, charged to salary, and our paying that illustrates that so thoroughly, and so practically demonstrates that a higher salary does pay, that they are quite fearless in telling us how much more they are getting every week; and sometimes that "more" is a

considerable sum. The more they get the better we are off. High wages, I think, too, will to an increasing degree make lower labor costs. It will compel more intelligent instruction on our part, and help the employees, both in storekeeping and in education in salesmanship. We find that the average man or woman is only too glad to respond, and can respond, and there is only a very small percentage that is not effective enough to increase their value when they get a chance. Most business men see that. A minority, just as in every line of business, in every walk of life, do not see it, and they are the scabs of business. * * *

Did we require a better type for a higher wage?

I think not. The average girl that comes into a store is quite able to respond if she is free from worry. We are trying always, for our own sake, to make our people more intelligent. We are trying to put in a more scientific method of buying and selling, and we need thoughtful people; but I do not think there is any greater discrimination made under a minimum wage than there was before. We have a feeling that we can easily get a reasonable response out of any girl who is well and who is free from the daily worries. A decent wage, then, seems to us the basis of intelligent work, and we feel that the minimum wage merely provides the machinery by which joint action is secured on the part of all in a trade. That is the important thing, it seems to me, that a minority sometimes holds out and makes impossible the good will and the more intelligent action of the majority. You have seen that happen in towns where they kept open every evening in the week because one or two pigheaded men would not agree with the others to close.

Now, a minimum wage helps in this respect, at any rate, in forcing the general protection which the community is entitled to have.

Now, to get down to the minimum wage as we have actually had it in our store. In 1912 we put in a minimum wage of $8, and the best evidence that that has been satisfactory is that on April 1 of this year we increased the minimum wage to $10. Of course, looking over a long period of years, from 1912, with the varying things that happened during those years, it would be presumptuous to try to ascribe to any one thing alone the satisfactory growth of the store, which has become by far the largest specialty store in the world, employing about 3,000 people and doing very much the largest business in this line. I am boasting of this because we believe that the volume of the business has grown as the result of this type of forward looking, which I can speak of with the greater freedom because in our store most of the work of this kind is done by our employees themselves. This minimum wage, the whole working out of this minimum wage that went into effect April 1, with all its

details, was done by a group of employees, and not by the management. We find that the more satisfactory and practical way to work. But, as near as we can judge of it, the effect of that $8 a week minimum was of the highest usefulness to the store. You have got to make some allowance.

Of course, when we were the only store giving that minimum we got the choice of the more thoughtful girls, and that is an advantage that if our competitors had been foresighted they would not have allowed us to get. They could have afforded to have paid $10 and gotten the choice of girls out of the high schools, as we got them, and "bought" the biggest bargains that they could have gotten. All in all, we have enough evidence that the minimum wage was of the utmost help to us, and one of the proofs is that relatively to the other costs of running the business the wage with an increased minimum is relatively lower than it had been before, just as with a bonus the percentage of the cost per dollar of sales is lower; and that is the only thing we are interested in, because we do not care how many hundreds of thousands of dollars it costs us to do business, but we do care whether the percentage of cost on sales has increased one one-hundredth of 1 per cent.

If the expense of the business increases $1,000,000 and the percentage of cost per dollar of sales decreases, then we are better off, of course.

In April of this year the minimum wage was increased to $10; $9 for an apprentice. Nobody in the store starts at less than $9 a week at present. But that group of employees found that $12 at present was not any more than $8 would have been in 1907. I sometimes figure rapidly in estimating what is happening now and what wages are necessary, that on this grade of wages food practically takes up about 50 per cent of the income per week, and if food has increased 100 per cent in cost, as we are told, doubled in price, then you get some indication of where wages ought to be at the present time. I do not know how scientific that reckoning is, but it makes a rough kind of reckoning in my mind that determines what ought to be done.

That group of employees determined that $12 would not be so much as $8 would have been in 1907; but reckoning that we are having some competition in Boston at the present time they recommended that at present we pay only $10 as a minimum wage and then increase it 50 cents a week every six months until anybody who had been there two years, starting at $10, would have $12 as the minimum wage; that is, they made it easier for themselves and for us under the circumstances. When the management went over that, as it had to, of course, to agree to it, we came to the conclusion

that from our best experience this minimum wage would not increase our selling cost. We may prove to be wrong, but I do not think we will be. Of course, it is to be remembered that we do transmit our expenses. We do not pay the expenses of the shop; we are simply a depot on the road of transportation from the source of production to the consumer.

The store fails if it does not get back from the public what it pays out. But we feel pretty sure, and we went into this increase in wages with less hesitation because—well, I suppose there was some feeling of doubt, but also from the business standpoint because—we feel definitely that it will be a good thing for our business, and will increase the efficiency of our help sufficiently so that it will be a net gain. * * *

We have not reached as yet the level that has been reached in many places. The Hudson Co. in Detroit have been for some time paying a $12 minimum, and the owners, the Webers, who are shrewd, broad-gauge, effective business men, are very enthusiastic on the results they have obtained. I think they have been using it about two years.

I think I ought to say before finishing, because I do not think it is commonly borne in mind, that cheap wages make a vicious circle. Cheap wages make cheap standards in employers, and cheap standards in us employers make cheap employees. It is a vicious circle that ought to be broken and destroyed.

WOMEN IN INDUSTRY.

WOMEN IN THE BRITISH ENGINEERING TRADES AFTER THE WAR.

A discussion of the attitude which should be taken by the trade-unions of Great Britain toward women in the engineering trades after the return of peace forms the most important part of a report, Women in the Engineering Trades, prepared by Barbara Drake[1] on the basis of a study carried through by a joint committee of the Fabian Research Committee and the Fabian Women's Group. The report begins with a discussion of the number of women in the engineering trades before the outbreak of the War, and presents data showing that the number was rapidly increasing even without the stimulus of war demands. A chapter is given to the methods of dilution of labor after the need became imperative, and a third part is devoted to a study of the position of women in these trades during the War. The section on "Reconstruction" deals with the problem of readjustment after the War, as it affects women employed in these industries.

The engineering trades were thrown open to women by the Treasury Agreement of March, 1915, by which the trade-unions bound themselves to give up, for the period of the War, all customs and practices which might tend to restrict production, including their opposition to the introduction of unskilled and woman labor, and the Government in return pledged itself to restore the trade-union customs intact at the end of the War. By the terms of that pledge, as soon as peace is declared the trade-unionists have the right to demand the ejection of women from nine-tenths of the work they are doing in the engineering trades, regardless of consequences. As a matter of fact, however, it is generally admitted that the exact and literal keeping of the pledge is a practical impossibility, and there is some doubt whether, from a trade-union standpoint, its keeping would be even desirable. But if it can not be kept, the workers have a right to demand a quid pro quo, and one of the objects of this report is to point out what substitute agreement, as far as the employment of women is concerned, would be satisfactory.

As a preliminary to any satisfactory compromise, the trade-unions must first set their own house in order in regard to the employment of women. Miss Drake believes strongly that for the men

[1] Women in the Engineering Trades, by Barbara Drake. Report based on an inquiry by a joint committee of the Fabian Research Department and the Fabian Women's Group. London, George Allen & Unwin, 1917.

unionists cooperation with women is the only alternative to dangerous competition from women. The employers have learned the possibilities of the automatic machine manned by unskilled or semi-skilled labor, and even though in accordance with the Treasury Agreement they discharged every woman who came into the trade under it, there is nothing to prevent them from employing others later on. Trade-union opposition is effective only when unionists have a monopoly of the skill required, and the employers have learned during the last three years to subdivide processes so that such a monopoly is no longer possible. Self-interest and principle alike should lead the trade-unionist to recognize the right of women to do any work for which they are physically qualified, and to help them to organize and secure fair treatment. Granting that the men are willing to do this, what terms shall be asked of the Government or the employers to be fair alike to all concerned? The following program is outlined:

The proposals made to safeguard the trade-union position against the admission of female labor in the engineering trades are summed up as follows:

(1) The securing of the rates customarily paid for the job on work not recognized as women's work before the War.

(2) The securing of an adequate minimum wage for all women employed in the engineering trades.

(3) The securing of a minimum of education for all young persons under 18 years of age.

(4) The securing of adequate provision against unemployment.

(5) The protection of female and immature labor from occupational injury.

(6) The securing of a direct share to the worker in the control of his or her working life.

The first proposal is primarily intended to maintain the standard rates of wages for male trade-unionists. Evidently they can not be maintained if, by slightly changing a job and calling it women's work, the employer is entitled to cut the price. Under this proposal the burden of proving that a given job is women's work would be thrown upon the employer, who could enforce the lower rate of wages only if he could show that the particular operation was in use before the War and was then recognized as peculiar to women. To meet the cases in which a woman is really not worth as much to an employer as a man, the report proposes that women may receive lower time and piece rates than men if the employer can prove one of the following propositions:

(*a*) That the woman is in need of training. In this case a rate shall be paid starting at the minimum rate for an adult woman and rising by steps until the full rate is reached at the end of a fixed period of probation. The payment of a probationary rate shall in each case be notified by the employer to the trade-union or trade-unions concerned and shall not otherwise be allowed. The period of probation and conditions under which a probationary rate is allowed shall be fixed by agreement between the employers' associations and trade-unions concerned.

(*b*) That a readjustment has been made in the process of such a character as would lead customarily to the employment of a different class of labor—e. g., to a semi-skilled instead of a skilled worker, a boy instead of a man. In this case a rate shall be paid not lower than the rate which would have been paid if male labor had been employed instead of female labor; or the minimum wage for an adult woman, whichever is the higher.

(*c*) That in order to meet the separate needs of female labor, a change or changes have been made in working conditions increasing the cost of production to the employer. In this case a rate shall be paid not lower than the rate customarily paid for the job by more than the cost entailed on the employer by the change or changes in question, or the minimum rate of an adult woman, whichever is the higher. No deduction from the rate shall be allowed except in respect of one or more of the matters set out in the following schedule:

THE SCHEDULE.

(1) Any apparatus, or accommodation, required by the law for the protection of female and not of male labor.

(2) Any mechanical apparatus, or assistance by male labor, provided to women and not to men, in order to reduce the strain on the worker.

(3) Any restriction of female labor to light tools, loads, or weights, diminishing output, and extended to women and not to men, in order to reduce the physical strain on the worker.

The amount of the deduction allowed from the rate on account of one or more of the matters in the schedule shall be fixed by agreement between the employers' associations and the trade-unions concerned.

The whole purpose of this first proposal is to fix the principle of "one rate for one job." A temporary and passing deficiency, like that of lack of training or inexperience, may not be made the basis for a permanent reduction in the wage. A permanent deficiency, like physical incapacity, may be made the basis of a reduction only to the extent to which it can be proved to increase the labor cost to the employer. The unions, under this arrangement, will not oppose the employment of women, but first making sure that the labor cost of a woman's work is the same as that of a man's, they will leave it to the employer to take the one who best suits him.

As to the second proposition, it is suggested that the minimum wage to be secured to all women in the engineering trades, whether on men's or on women's work, shall be not less than "the equivalent in real wages of the 17s. [$4.14] a week estimated by the Women's Cooperative Guild before the War as the minimum subsistence wage for an adult woman." For young girls undergoing a definite course of training this might be reduced by not more than one-third. It is also proposed that trade boards shall be established for the women's branches of the engineering trades, working forward from the war standard of wages.

The purpose of the third proposal, the securing of a minimum of education to all young persons, is to reduce competition as well as to insure the welfare of the children. It is urged that the school age

should be raised at once to 14, and that half-time school attendance during working hours should be compulsory up to 18.

The fourth proposal, adequate provision against unemployment, is discussed solely with reference to women, as the men's unions have already put forth proposals for the prevention of unemployment among men. This proposal, as well as the third, involves half-time shifts for young people under 18, which necessarily reduce their competition, a competition from which women are far more likely to suffer than are men. As a further step in the same direction it is proposed that when the index of local unemployment reaches a certain point, the education authorities shall retain at school for whole-time education with maintenance a proportionate number of young persons, and that when the index of unemployment in a given trade or trades reaches a certain figure the Home Office shall remove from these trades a proportionate number of young persons for whom whole-time education with maintenance shall be provided for at least one term. If these measures prove insufficient, a still more radical step is proposed:

Adequate maintenance, with the option of training, shall be provided for all unemployed women for whom no places are available in their own trades, prewar or present, at the employment exchanges.

In behalf of this proposal it is urged that the schemes usually proposed to regulate unemployment, such as construction of public works, afforestation, and the like, are seldom suited for women. Training, with maintenance, would be an equivalent, safeguarding the women against unemployment, and at the same time preparing them to do their part more effectively thereafter. The training would be along distinctly feminine lines:

Schemes are suggested in continued general and technical education, instruction in housewifery and the making of articles for home use, the training of midwives and mothers' helps, the latter a new and useful profession for middle-aged women, practical instruction in infant care for young and expectant mothers, the last measure offering the incidental advantage of removing these women temporarily from industry.

For the adequate protection of female and immature labor from occupational injury, which forms the fifth proposal, the following steps are proposed:

(1) A reduction in the legal hours of work to 48 a week after the War.

(2) That the number of women factory inspectors and medical officers attached to the factory department shall be increased.

(3) That routine medical inspection and treatment shall be extended to all young persons under 18 years of age. The inspection and treatment shall be carried out by the school medical officer during school hours.

(4) That a departmental inquiry shall be undertaken by the responsible Government department or departments into the effects of occupation on maternity.

(5) That the appointment of a forewoman or woman supervisor shall be compulsory in factories or workshops employing young girls under 21 years of age.

The final proposition, looking to the worker's share in the control of his working life, puts forth the idea of works' councils, which has been elaborated in various reports, but adds to it a subcommittee to be known as the welfare committee. Owing to their more permanent stay in industry, the men will naturally make up the works' council either wholly or almost so, but women are to be represented on the welfare committee in all establishments in which they are employed. The field of work contemplated for this committee is wide:

> The reference includes sanitary and health conditions, first aid, cloakroom, canteen, or hostel arrangements, personal and social amenities; matters concerning the workers alone being discussed by themselves in separate session and not in joint session with the employer. Nor are matters lacking for immediate discussion. Thus, the workers who view with concern the provision of canteens and hostels by the employer have yet to decide the best alternative, whether in individual, trade-union, municipal, or cooperative enterprise. The institution of half-time shifts for married women or others having half-time home duties shows another matter for discussion in special reference to female labor. * * * The institution of the "sick worker" shows another matter for discussion in special reference to female labor. The device is not unknown in the cotton trade, the female operative attaching a "sick worker" or understudy, the latter a retired member of the trade; and one takes the place of the other at times of indisposition or home emergency. * * * The welfare committee will also include within its reference cooperation with the factory inspector and medical officer, and play, in fact, the woman's part in the factory to the man's part played by the works' council.

The volume contains also minority reports from six members who dissent from part or all of the program outlined by Miss Drake. The strongest objection is to the proposal that rates paid to women should be reduced under the conditions set forth above. Several members claim that to allow a probationary rate would open the door to serious abuses and tend to build up a dangerous reserve of possible competitors; one rate for one job should be the rule, with no modifications of any kind. A reduction of the rate when a woman's work involves a greater labor cost to the employer is objected to on the ground that the employer alone has possession of the data showing what this extra cost is, and that he might cut the rate far below what the facts warrant without the unions being able to make any effective resistance. Difference of opinion also appears about the composition of the works' councils, the educational proposals, and the suggestion of a minimum rate and trade boards for the women's branches of the trade.

RESTRICTIONS ON THE EMPLOYMENT OF WOMEN ON STREET RAILWAYS IN WISCONSIN.

The industrial commission of Wisconsin has had before it for more than a year the question of determining the hours of labor of women under the authorization of law directing it to make investigations,

fix classifications, and issue general or special orders fixing the periods of time and hours of beginning work necessary to protect the life, health, safety, or welfare of females. Orders were issued in June of last year forbidding night work in and about manufactories and laundries in the State, night work being defined as that taking place between 6 p. m. and 6 a. m. In January of the present year the matter of the employment of women on street car lines was taken up, resulting in the issue of the following order:

Order No. 4.

In cities of the first class women may be employed as conductors, motormen, or flagmen by street car lines only at day work between the hours of 8 a. m. and 5 p. m.

In all other cities and in towns and villages, women may be employed in the employments named only at day work between the hours of 6 a. m. and 5 p. m., and their hours of labor during any day must not exceed eight hours.

This order will take effect June 10, 1918, and is based on the following findings of fact:

1. That throughout the State the employment of women as conductors, motormen, or flagmen by street car lines for more than eight hours in any day, exclusive of meal periods, or at night, or during the evening rush period, and in cities of the first class also during the morning rush period, is prejudicial to the life, health, safety, and welfare of such women.

2. That the morning rush period for street car lines ends about 8 a. m. and the evening rush period begins about 5 p. m.

There was practically but a single opponent to the action of the commission in arriving at these findings or issuing its order, the Wisconsin Gas & Electric Co. at Kenosha being the only company that manifested any interest in the matter. This company appears to be the only one of its kind employing women in such service, a number of the street car companies of the State having replied to the notice of the hearing that they were not interested, as they employed no women. Letters were received from a number of citizens of Kenosha urging that any further restrictions than those contained in the statutes of the State would be prejudicial to the service rendered by the Wisconsin Gas & Electric Co. at Kenosha. On the other hand were the protests of representatives of the Wisconsin Consumers' League, the Wisconsin Federation of Women Wage Earners, the Wisconsin Federation of Labor, and other organizations and interested individuals against employment at night in particular, the objection in some cases reaching to any employment whatever of women as conductors, motormen, and flagmen. Certain arguments advanced could not be considered by the commission, as the scope of its power was restricted to the limitation of periods of time necessary to protect the life and health of women.

Economic matters, therefore, or the supply of male labor, could not be given weight.

The claim was made that a street car is not a "place of employment" within the meaning of the law, but this contention was not admitted by the commission, and it proceeded to reach the conclusions of fact already quoted. These findings are based on the practical necessity of continuous standing and the effects of the vibration and jostling where the roadbed is uneven; while a point on which considerable emphasis was laid was the requirement that conductors must get out of the car at flag crossings regardless of the inclemency of the weather, such action being necessary on some runs as many as 108 times during a period of six hours of work. The usual practice of boarding a car while in motion after flagging was also referred to as a hazard.

Other objections were the fact that motormen and flagmen worked alone, and not in company with other women, that the sanitary arrangements are inconvenient and not easily adapted to the needs of women employees of this type, that working at night and during rush hours exposes women to liability of insult from offensive passengers, while all night work is prejudicial to the welfare of female employees. On the latter point the arguments that led to the abolition of night work in manufactories and laundries were held to be fully as applicable to street railway service, while the times of the rush periods further shortened the portion of the day during which it was thought desirable that women should be employed.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

WORKS COMMITTEES AS PART OF THE INDUSTRIAL COUNCIL PLAN OF GREAT BRITAIN.

In the first and second reports of the British Committee on Relations between Employers and Employed (the Whitley Committee)[1] references were made to the establishment of works committees, representative of the management and of the workpeople, and appointed from within the works, as an essential part of the scheme of organization suggested to secure improved relations between employers and employed. A "Supplementary report on works committees" has now been published,[2] which deals more fully with the proposal to institute such committees. The full text of this report is given below:

SUPPLEMENTARY REPORT ON WORKS COMMITTEES.

In our first and second reports we have referred to the establishment of works committees,[3] representative of the management and of the workpeople, and appointed from within the works, as an essential part of the scheme of organization suggested to secure improved relations between employers and employed. The purpose of the present report is to deal more fully with the proposal to institute such committees.

2. Better relations between employers and their workpeople can best be arrived at by granting to the latter a greater share in the consideration of matters with which they are concerned. In every industry there are certain questions, such as rates of wages and hours of work, which should be settled by district or national agreement, and with any matter so settled no works committee should be allowed to interfere; but there are also many questions closely affecting daily life and comfort in, and the success of, the business, and affecting in no small degree efficiency of working, which are peculiar to the individual workshop or factory. The purpose of works committee is to establish and maintain a system of cooperation in all these workshop matters.

3. We have throughout our recommendations proceeded upon the assumption that the greatest success is likely to be achieved by leaving to the representative bodies of employers and employed in each industry the maximum degree of freedom to settle for themselves the precise form of council or committee which should be adopted, having regard in each case to the particular circumstances of the trade; and, in accord-

[1] The first report of the Whitley Committee was published in Bulletin 237 of the U. S. Bureau of Labor Statistics, and the second report was summarized in the May, 1918, issue of the MONTHLY REVIEW, pages 59 to 61.

[2] Great Britain, Ministry of Reconstruction. Committee on relations between employers and employed. Supplementary report on works committees London, 1918. 4 pp. Price, 1d, net.

[3] In the use of the term "works committees" in this report it is not intended to use the word "works" in a technical sense; in such an industry as the coal trade, for example, the term "pit committees" would probably be the term used in adopting the scheme.

ance with this principle, we refrain from indicating any definite form of constitution for the works committees. Our proposals as a whole assume the existence of organizations of both employers and employed and a frank and full recognition of such organizations. Works committees established otherwise than in accordance with these principles could not be regarded as a part of the scheme we have recommended, and might indeed be a hindrance to the development of the new relations in industry to which we look forward. We think the aim should be the complete and coherent organization of the trade on both sides, and works committees will be of value in so far as they contribute to such a result.

4. We are of opinion that the complete success of works committees necessarily depends largely upon the degree and efficiency of organization in the trade, and upon the extent to which the committees can be linked up, through organizations that we have in mind, with the remainder of the scheme which we are proposing, viz, the district and national councils. We think it important to state that the success of the works committees would be very seriously interfered with if the idea existed that such committees were used, or likely to be used, by employers in opposition to trade-unionism. It is strongly felt that the setting up of works committees without the cooperation of the trade-unions and the employers' associations in the trade or branch of trade concerned would stand in the way of the improved industrial relationships which in these reports we are endeavoring to further.

5. In an industry where the workpeople are unorganized, or only very partially organized, there is a danger that works committees may be used, or thought to be used, in opposition to trade-unionism. It is important that such fears should be guarded against in the initiation of any scheme. We look upon successful works committees as the board base of the industrial structure which we have recommended, and as the means of enlisting the interest of the workers in the success both of the industry to which they are attached and of the workshop or factory where so much of their life is spent. These committees should not, in constitution or methods or working, discourage trade organizations.

6. Works committees, in our opinion, should have regular meetings at fixed times, and, as a general rule, not less frequently than once a fortnight. They should always keep in the forefront the idea of constructive cooperation in the improvement of the industry to which they belong. Suggestions of all kinds tending to improvement should be frankly welcomed and freely discussed. Practical proposals should be examined from all points of view. There is an undeveloped asset of constructive ability—valuable alike to the industry and to the State—awaiting the means of realization; problems, old and new, will find their solution in a frank partnership of knowledge, experience and good will. Works committees would fail in their main purpose if they existed only to smooth over grievances.

7. We recognize that, from time to time, matters will arise which the management or the workmen consider to be questions they can not discuss in these joint meetings. When this occurs, we anticipate that nothing but good will come from the friendly statement of the reasons why the reservation is made.

8. We regard the successful development and utilization of works committees in any business on the basis recommended in this report as of equal importance with its commercial and scientific efficiency; and we think that in every case one of the partners or directors, or some other responsible representative of the management, would be well advised to devote a substantial part of his time and thought to the good working and development of such a committee.

9. There has been some experience, both before the War and during the War, of the benefits of works committees, and we think it should be recommended most strongly to employers and employed that, in connection with the scheme for the establishment of national and district industrial councils, they should examine this experience with

a view to the institution of works committees on proper lines, in works where the conditions render their formation practicable. We have recommended that the Ministry of Labor should prepare a summary of the experience available with reference to works committees, both before and during the War, including information as to any rules or reports relating to such committees, and should issue a memorandum thereon for the guidance of employers and workpeople generally, and we understand that such a memorandum is now in course of preparation.[1]

10. In order to insure uniform and common principles of action, it is essential that where national and district industrial councils exist the works committees should be in close touch with them, and the scheme for linking up works committees with the councils should be considered and determined by the national councils.

11. We have considered it better not to attempt to indicate any specific form of works committees. Industrial establishments show such infinite variation in size, number of persons employed, multiplicity of departments, and other conditions, that the particular form of works committees must necessarily be adapted to the circumstances of each case. It would, therefore, be impossible to formulate any satisfactory scheme which does not provide a large measure of elasticity.

We are confident that the nature of the particular organization necessary for the various cases will be settled without difficulty by the exercise of good will on both sides.

AGREEMENT IN THE CHILDREN SHOE MANUFACTURING INDUSTRY, NEW YORK CITY.

The following memorandum of agreement was entered into the 6th of April, 1918, between the Children Shoe Manufacturers' Association of New York (Inc.), called the Association, and the Children Shoe Workers' Union, called the Union:

Both parties are desirous of bettering conditions in the children shoe industry and of creating standards of labor throughout the industry by peaceful and honorable methods. They recognize that to accomplish this end it is necessary to have an organization representing the workers in the industry and an organization representing the employers, and a collective agreement between the two organizations, both pledging their good faith to cooperate for the enforcement of such an agreement.

ARTICLE I.

It is hereby agreed by both parties that the members of the Association will employ for their cutting, fitting, turning work, riveting, and all other work in connection with the work of the children shoe making, workers who are members of the Children Shoe Workers' Union, as hereinafter provided.

A. Should the Union be unable to supply the members of the Association with sufficient and competent help, the members shall have the right to engage help from any source. It is understood that such help thus engaged shall join the Union at the earliest possible time.

ARTICLE II.

Hours—Overtime.

For cutters and fitters, fifty-two (52) hours shall constitute a week's work of six working days, to be divided as follows: During the first four days of the week, work is to begin at 7 o'clock a. m., to continue to 12 m., and from 1 o'clock p. m. to 6 o'clock

[1] This memorandum is now completed and will be published immediately by the Ministry of Labor.

p. m. On the fifth day of the week, work is to begin at 7 o'clock a. m., to continue to 12 m., and from 1 o'clock p. m. to 5 o'clock p. m.; on the sixth day of the week, work is to begin at 7 o'clock a. m. and to continue to 12 o'clock m. Turn workers and riveters are to work fifty-two (52) hours per week.

Overtime work of week workers shall be paid at the rate of time and a half.

ARTICLE III.

Wages.

Wages shall be paid and in cash.

The employers agree to grant increases in wages to their workers as follows:

Cutters are to receive ¼ cent per piece, increase effective from Monday, April 8, 1918, and an additional ¼ cent increase effective from August 1, 1918.

Lasters will receive an increase of ½ cent per piece, effective from Monday, April 8, 1918, and an additional ½ cent increase effective on August 1, 1918.

Finishers will receive an increase of ⅓ cent per piece, effective from Monday, April 8, 1918.

All week workers will receive one dollar ($1) increase effective from Monday, April 8, 1918.

Men week workers will receive an additional one dollar ($1) increase effective August 1, 1918.

It is hereby agreed that the committee on adjustment will prepare schedules of operations and prices, standardized as far as possible. These schedules, when formally adopted by the committee on adjustment, shall form a part of the agreement.

ARTICLE IV.

Miscellaneous.

A. It is agreed that during the dull season there will be an equitable distribution of work as far as earnings are concerned. Such distribution shall be arranged between the workers and the firm.

B. No time contract between the firm and a member of the Union shall be permitted.

C. No cash or other form of security shall be accepted or required by the firm as a condition of employment.

D. No employee shall be required to prepare his own stock. The firm shall furnish its employees with fitted soles, fitted tips, fitted heels, drilled soles, and numbered boxes of second lasts.

E. The Association agrees not to discharge workers without sufficient cause or reason after the said worker has been engaged by the firm for a period of four (4) weeks. No discharge shall take place without the consent of the Union. It is understood, however, that in case of a disagreement between the Association and the Union, or the firm and the Union, the question shall be submitted to a committee on adjustment (as provided in Article V of the agreement), whose decision shall be final and binding.

F. The sanitary conditions in the shops shall conform to the requirements of the labor law of the State.

G. No work shall be permitted in cellars or basements.

H. No home work shall be permitted.

I. The Union shall have the right to designate or elect from among the workers in each shop a shop chairman, whose duty it shall be to see to it that the employees of the firm are members in good standing in the Union, in accordance with the provisions of Article I of this agreement.

ARTICLE V.

Adjustment of disputes.

A. The parties to this agreement agree that there shall be no strike or lockout during the continuance of this agreement, for any reason whatsoever, or because of any matter in controversy or in dispute between the Association and the Union, but that all matters in controversy or dispute, if any, shall be immediately referred to the managers of the respective organizations by the party or parties aggrieved, for immediate joint investigation or adjustment. In the event that the representatives of the party or parties hereto shall be unable to adjust the controversy or dispute, the same shall be immediately referred to the committee on adjustment. The controversy or dispute shall be adjusted within forty-eight (48) hours unless the time be extended by mutual consent. The decision of the committee on adjustment shall be conclusive and binding upon all parties concerned.

B. The committee on adjustment shall consist of seven (7) members, three (3) designated by the Association, three (3) designated by the Union, and a chairman agreed upon by the six (6), for the life of the agreement. In case the six (6) can not agree on the naming of a chairman, Dr. J. L. Magnes shall have the authority to designate one.

C. The representatives of the Union shall be permitted to confer with the firm or with the employees in the factory.

Duration.

This agreement shall commence at once and terminate in two (2) years from this date. On or about March 1, 1920, the committees of the Association and the Union shall meet to determine whether or not the agreement shall be continued or modified, and if continued, for what period.

The wages stipulated in this agreement are not subject to revision until January 1, 1919. It is understood, however, that the Union shall have the right to call the Association into conference on December 1, 1918, with a view for a revision of the stipulated wages and hours, to take effect January 1, 1919.

Each party to the agreement shall have the right to call upon the other side to designate, when occasion requires, a special committee to confer upon matters of mutual concern. At such conferences, the chairman of the committee on adjustment shall preside, but shall not have the power of vote.

EMPLOYMENT AND UNEMPLOYMENT.

NATIONAL CONFERENCE OF EMPLOYMENT MANAGERS, ROCHESTER, N. Y., MAY 9-11, 1918.

The program of the National Conference of Employment Managers, held at Rochester, N. Y., May 9 to 11, inclusive, was arranged to consider the general theme of "Man power in war time." The subjects treated were Training labor executives; Destructive recruiting and kindred problems; Labor turnover; Dilution and special training; Selecting workmen; A National labor policy; and Social problems of the individual.

Features of the conference were the graduation of the first class in the Government's war emergency course in employment management conducted by the University of Rochester, and the address by the Secretary of Labor, Hon. W. B. Wilson, who told what the United States Department of Labor is doing in its efforts to help solve the many labor problems that are vexing the country, and who outlined the purposes and plans which the department is striving to put into effect to coordinate and harmonize all the activities which have to do with labor and the workingman.

An address by Hon. Royal Meeker, Commissioner of the United States Bureau of Labor Statistics, was devoted to a discussion of the fundamental aspects of cost of living studies in their bearing upon the question of wages, since most labor disputes center about this question of wages, attention being called to the difficulties, first, of determining what is a proper standard of living and then of agreeing upon the wage increase to be granted based upon percentages of increase in the cost of living as fixed by that standard. The procedure adopted by the Bureau of Labor Statistics in making cost-of-living inquiries was briefly outlined, indicating the impossibility of obtaining absolutely accurate figures, but suggesting the desirability of at least getting estimates that are usable in determining what percentage of advance should be made in wages in order to make their purchasing power as great as it was before prices took a sharp upward turn.

The first session of the conference was devoted to a discussion on training labor executives, Prof. Meyer Jacobstein, of the University of Rochester, telling of his work in conducting the first Government course for the training of employment managers, a

six-week course covering four divisions of practical theory: (1) Employment department practices; (2) Labor economics; (3) Industrial organization; and (4) Statistics.

Dr. Kristine Mann, of the woman's division, United States Ordnance Department, emphasized the importance of conserving the health of all women in industry through the cooperation of management and employees which, she stated, could best be accomplished in each establishment by the employment of "a trained health officer (not necessarily a doctor) whose duties would be (1) to see that the hygienic conditions under which women must work and live are made as satisfactory as possible, and (2) to educate them to their personal responsibility in the matter of their health" in order that they may maintain a high standard of health by wholesome ways of living, including sensible clothing, nourishing food, and adequate exercise. A course of training for such health officers was outlined by Dr. Mann, who stated that—

> The woman supervisor should be able to advise the manager in rest rooms, canteen, the physical condition of individual girls—not as respects disease, but as to probable physical power and efficiency—should be able, by keeping closely in touch with the worker, to observe early signs of undue fatigue and to suggest ways of obviating strain and suggest conserving power, as by the maintaining of good posture. She should be able to advise the normal girl on diet, recreation, exercise, supplementing the work of the doctor. She should be in close touch with the employment manager, advising him in the placing of girls in accordance with their physical capacity. On the other hand, she must know something of factory problems from the employer's side that close cooperation may be effected.

Dr. Mann's paper was quite generally discussed.

Capt. Boyd Fisher, chairman of the program committee, presented the diplomas to the graduating class. He referred to the graduates as representatives of a new profession which has come to be recognized as of sufficient importance in the industrial world to suggest the necessity of a definite course of instruction to fit men to cope with the many employment problems that are presented in everyday business.

The subject for discussion at the afternoon session on May 9 was Labor recruiting and kindred problems. Addresses were made by S. R. Rectanus, of the American Rolling Mill, Middletown, Ohio, on Absenteeism; W. D. Stearns, of the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., on Standardization of occupations and rates of pay; by Hon. Royal Meeker, of the United States Bureau of Labor Statistics, on Methods of comparing cost of living in various cities as the basis for setting wage rates, to which reference has been made; by William Blackman, Director of Labor of the United States Emergency Fleet Corporation, and Charles T.

Clayton, Assistant Director General of the United States Employment Service, on Destructive labor recruiting; and by Morris L. Cooke, of the general manager's office, United States Emergency Fleet Corporation, on the present labor situation.

In speaking on Absenteeism S. R. Rectanus pointed out the great problem of "the men who work nearly every day, the men whose output is needed, who can work and should work, but who don't work," suggesting that statistics show that every day about 10 per cent of the men who should be on duty are missing, the principal excuse given for their laying off being that they do not feel like working. It is important to show these men by education, by advertising, and by example why they should work continuously. Bonus schemes, the keeping of records of individual workers, and attendance contests were suggested as incentives to work.

W. D. Stearns made a plea for standardization of occupations and rates of pay as a general policy, which is of immediate urgency in our one aim to win the War. It is very difficult, he suggested, for two industrial managers, even if the products are similar, to talk intelligently regarding occupations or rates of pay because they do not have a common nomenclature, different words often being used for the same occupation, and what one manager might consider a first-class operator would be considered a third-class operator in another concern. And even if standard names were used for standard jobs and each job were classified according to the skill required for that job, there would still exist the inconsistencies regarding rates of pay in different plants. The work of standardizing occupations and rates of pay, in the opinion of the speaker, should proceed along four lines: (1) Determining standard occupations, carefully defining them, listing them, and giving them standard names; (2) Dividing all employees into classes based upon their relative value to the industry, the measure of this value or service, among other things, being based upon the degree of mechanical skill, supervising ability, initiative and judgment, physical strength and endurance, or willingness to do disagreeable work; (3) Determining what class of man is needed for each occupation, the selection to be based upon the nature of the work to be performed; (4) Determining rates of pay for the various classes, the rate of pay for the highest class and for the lowest class being fixed by the labor market in the specific locality and the other rates being distributed between these two limits.

The general plan being thus presented, the remainder of the paper was confined to a description of how the scheme had been adapted to the specific problems in the plant of the Westinghouse Electric & Manufacturing Co. at East Pittsburgh.

In reviewing the operations of the Shipbuilding Wage Adjustment Board, whose decisions have appeared in recent issues of the MONTHLY REVIEW,[1] William Blackman described the evils attending the "stealing" of men by one shipyard from another, offering higher wages as an inducement, and emphasized the necessity of recruiting all labor through one agency—the Federal Employment Service. The Assistant Director General of the United States Employment Service, Charles T. Clayton, followed with a paper in which he analyzed examples of destructive labor recruiting in order to point out the present and future effects of such conditions on industries necessary to the prosecution of the War. "Stealing" men, it was stated, leads to an enormous loss of time, an immense waste in spoiled material, reduction of output, huge waste of public funds, and labor unrest. The remedy suggested is to recruit all labor through the Federal Employment Service, to establish common wage scales in competitive districts, and to develop man power that is intensely trained, involving the hiring of employment managers. The activities and program of the Federal Employment Service were briefly stated.

The presence of an employment department in each industrial establishment would greatly facilitate the development of a national labor policy, according to Morris Cooke, who discussed the present labor situation. Responsibility for the conditions that now exist in the industrial world was placed squarely upon the management and the men who toil. Publicity with regard to the work performed by individuals and by groups so that the slacker is driven out was urged as second only to job analysis. Employers must learn the "technique of paying high wages and getting returns for them," and the workers must realize that their responsibility lies in greater production.

The evening session on Thursday was devoted to further discussion of the subject of destructive labor recruiting, which, of course, involves the important problem of labor turnover. Commissioner Meeker, of the United States Bureau of Labor Statistics, was called upon first to report on labor turnover. He called attention to the study of labor turnover which he was about to undertake with the object of making known the best methods of stabilizing the labor force and thereby reducing the turnover. The very important bearing of labor turnover on the prosecution of the War and the desirability of handling the problem in an intelligent manner by keeping proper and adequate records of the man hours, or at least the man days, worked by establishments was strongly emphasized. Several questions in the schedule were taken up in detail and reasons given for requesting the information asked.

[1] March, 1918, p. 67; April, 1918, p. 132; May, 1918, p. 127.

The idea of centralizing all employment activities in the Federal Employment Service and the abolishment of private agencies was quite generally approved by speakers at this session. However, the policy of some concerns in employing workers who apply directly at the plant was not discouraged. The evening's discussion tended to clear up some misunderstandings as to the purpose and plans of the Federal Employment Service in its efforts to reduce labor turnover.

During the session provision was made for the appointment of a committee to draft a definition and method of computing percentages of labor turnover. Mr. Roy W. Kelly, of the vocational bureau of Harvard University, was later chosen chairman of this committee, the other members of which were E. H. Fish, of the Norton Grinding Co., Worcester, Mass.; W. C. Maston, of the Eastman Kodak Co., Rochester, N. Y.; W. I. Kitson, of the Solvay Process Co., Syracuse, N. Y.; Hugh Fullerton, of H. Black & Co., Cleveland, Ohio; S. R Rectanus, of the American Rolling Mill Co., Middletown, Ohio; Roy S. Hubbell; and Hon. Royal Meeker, Commissioner of the United States Bureau of Labor Statistics. The report, which was later adopted, is as follows:

STANDARD DEFINITION OF LABOR TURNOVER AND METHOD OF COMPUTING THE PERCENTAGE OF LABOR TURNOVER.

Labor turnover for any period consists of the number of separations from service during that period. Separations include all quits, discharges, and lay offs for any reason whatsoever.

The percentage of labor turnover for any period considered is the ratio of the total number of separations during the period to the average number of employees on the force report during that period. The force report gives the number of men actually working each day as shown by attendance records.

It is recommended that the percentage turnover be computed for each week. All turnover percentages for a week or for any other period should always be reduced to a yearly basis and be reported in terms of percentages per annum.

To compute the percentage of labor turnover for any period, find the total separations for the period considered and divide by the average of the number actually working each day throughout the period. Then multiply by the proper factor to reduce to a yearly basis.

Example:

Method of computing percentage of labor turnover for one week.

Total number of separations during week 300

Daily force reports (workers actually on the job):

Monday	1,020	Wednesday	1,070	Friday	1,040
Tuesday	1,065	Thursday	1,035	Saturday	990

Average for week 1,037

Percentage labor turnover, $\frac{300}{1,037} \times 52 = 1,504$ per cent.

Method of computing percentage of labor turnover for one year.

(Assuming that records of daily attendance are averaged for each month.)

Total number of separations during the year..... 5,020

Average number working each month as determined from the force reports or daily attendance records:

May	2,040	August	1,980	November	2,280	February	2,170
June	2,100	September	2,200	December	2,240	March	2,230
July	2,000	October	2,220	January	2,250	April	2,400

Average for year..... 2,176

Percentage labor-turnover, $\frac{5,020}{2,176}$=231 per cent.

In case the number employed by a plant or a department of a plant decreases because it is the deliberate policy of the plant management to reduce permanently its working force, this fact should be explicitly stated and the reasons for the reduction in force given.

Miss Helen Bacon, director of the mayor's Americanization committee of Cleveland, in speaking on the general subject of dilution and special training, at the Friday morning session, introduced a phase of the employment problem that had not previously been mentioned, namely, the question of how best to manage the foreign-born working element which is so large a part of our industrial system and which may become more pronounced as a result of the War. She contended that industry should do all it can to Americanize the foreign workman, for "it is up to us to make these men just as American as we can, else we are going to have a great many of our industries practically foreign." She emphasized the point that Americanization must not only seek to give the foreigner an opportunity to learn American ways, ideals, and purposes so as to become a loyal citizen, but that it must also recognize his own national characteristics and individual habits and endeavor to develop a training that will not antagonize, but will show him that this country is superior to his own and that we would like to have him remain with us. The part that employers may take in Americanizing foreigners was touched upon, the result being achieved by offering opportunities for free legal advice, part-time instruction, and good library facilities—in other words, by making it as easy as possible for the foreign workman to learn English and become familiar with American methods of work.

One of the great problems with which industry has to deal is how to get maximum production and steady attendance in factories where Negroes are employed, and at the same time preserve the proper spirit between the white and the black workers. Some suggestions along this line were offered by Eugene Kinkle Jones, executive secretary of the National League on Urban Conditions among Negroes.

In view of the increased employment of women in occupations formerly open only to men the question of standards for women employees becomes of marked significance in any discussion of labor problems. Hugh Fullerton, of H. Black & Co., Cleveland, in his paper at the Friday morning session, approached the subject from four angles—standards of employment, of work, of health and sanitation, and of wages—pointing out in the first instance that there should be a woman interviewer in the employment department of every establishment employing women, that medical examination prior to employment should be required, that no female under 18 years of age should be in industry, and that every woman employee should have a proper introduction to her work. He advised putting women in the charge of women foremen, and suggested that 48 hours are enough for women to work in a week. To preserve health, women should not be placed in work for which they are not fitted; rest periods and lunch-room facilities should be arranged. As to wages, the piece-rate system, with the same pay for women as for men, was advised; some drawbacks to paying the same weekly wages to women as to men were suggested.

"Selecting workmen" was the general topic under discussion at the session on Friday afternoon. Mark Jones, of the Edison Co., East Orange, N. J., spoke on trade tests, referring at length to the methods adopted and the difficulties encountered by the committee on classification of personnel in the Army, appointed by the Secretary of War to classify and record on suitable cards every man in the military service according to the particular talent he may possess, his trade, experience, education, vocational assignment with the Army, personal history, etc., so as to facilitate the selecting of men required by the Government for a specified piece of work. In other words, the work of the committee is a National job analysis on a huge scale. Fitting the man to the job, it was stated, involves some skill on the part of the interviewer, who, in talking with the man, should consider his personal desires, his personality, his trade knowledge, and his skill, the importance of each depending entirely upon the job to be filled. A great deal depends upon the judgment of the interviewer. Some test questions to be used by interviewers were suggested.

A brief discussion on the general subject of job analysis was led by H. G. Kobick, of the Commonwealth Edison Co., Chicago, who told how jobs had been analyzed in that establishment. The discussion brought out some of the benefits of job analysis, among which are: (1) the employment department is thus able to secure an authentic list of the duties and responsibilities of each job, somewhat simplifying its work, and (2) wages and salary schedules are more easily and

more completely modified. One speaker outlined the Rochester plan of handling the employment problem through a central organization of manufacturers of war supplies formed for the purpose of so conducting the plants as to produce the maximum output required by the War Department without drawing labor needed in other establishments or in other communities. This phase of the employment problem was discussed at some length.

The banquet was held Friday evening, May 10. The speeches on this occasion centered about the general subject, "A National labor policy." Prof. Ordway Tead, of Columbia University, briefly reviewed the accomplishments of the Government in its labor policy during the War. Meyer Bloomfield, head of the industrial service section of the United States Emergency Fleet Corporation, referred to the great advance that has been made in recent years in the science of handling men and to the development of the new and extremely important profession of the employment manager. He suggested two questions for consideration, without attempting to answer them:

1. If you are a common denominator between management and men will it always be the case that the management alone shall pay your salary? * * * If your service is of as great importance and value to the masses of workers as it is to the management, is it too fanciful an idea to suggest that perhaps the workers themselves through some form or another may choose to look upon you or some representative of your profession as one of their allies and associates quite as they have the lawyer or the physician or any other specialist whose services are open to all who seek that service?

2. If employment is a semipublic or a public function essentially, what is to be the public's and the Government's ultimate relation with the men who follow the principles and the technique of this very vital industrial service?

Hon. W. B. Wilson, Secretary of the United States Department of Labor, called attention to the necessity of a definite labor program in order that production at home might be adequate to support the men at the front and outlined what the Government has accomplished in establishing and successfully carrying out such a program. The first step necessary was to combat enemy propaganda, chief of which was the attempt to create the idea that this is a capitalists' war and that the destruction of excessive profits could be effected by reducing production through strikes, sabotage, or other means. It was essential to bring the people to a correct attitude of mind toward industrial questions in order that they should realize "that even in normal times, if we had no war, labor and capital have a mutual interest, not an identical interest, * * * in securing the largest possible production with a given amount of labor, having due regard for the health, the safety, and the property, and for the enjoyment of the workers themselves."

If we produce nothing, there can be nothing to divide. If you produce a large amount, there is just that much more to divide. And the interests of the employer and the employee only diverge when it comes to the point of the distribution of that which has been produced; and if they are wise business men, instead of resorting to strikes and lockouts, and thereby limiting production, they will sit down around the council table and work the problem out on as nearly a correct mathematical basis as the circumstances surrounding the industry will permit.

Having provided the methods for meeting the propaganda of the enemy, continued the Secretary, the Government turned its attention to the adjustment of labor disputes. The plan for the establishment of labor adjustment boards was not successful because of minor contentions, and the President, in January, authorized the Department of Labor to work out a labor policy. This led to the appointment of the National War Labor Board,[1] which has since worked out a method of labor adjustment that is imposed only when workmen and their employers are unable to come to a mutually satisfactory agreement. The hope was expressed that the efficiency of this board might be perfected by adopting the plan of writing into all contracts the requirement that the employer shall abide by the decisions of the board.

The Secretary referred briefly to the necessity of reducing labor turnover; the great need for employment managers, with their study of the most important element in industry—the human element; the establishment of machinery for mobilizing labor and supplying industry with workers when and where needed in order to avoid the destructive competition among employers anxious to get workers from whatever source possible.

With that kind of competition there can be no proper labor program carried out, and we are rapidly remedying that kind of a situation. There is a sympathetic consideration of the problem going on with representatives of the War Department, the Navy Department, the Shipping Board, and the Department of Labor. I do not think it is going to be very long now before there will be written in the contract provisions that the contractor on the part of the Government will not go out independent of other agencies, advertising for labor or sending out his private agents to secure it; but that when labor is secured for the private employer doing work for the Government, or if the Government does its own work, then when labor is secured for them it will be secured through one central agency having a sufficient number of efficient branches in all parts of the United States.

At the morning session on May 11 the delegates went on record in favor of forming a permanent association to be known as the National Association of Employment Managers, by adopting, after some amendment, the report of the organization committee stating the objects of such association, defining the conditions of membership, suggesting

[1] See MONTHLY REVIEW for April, 1918, pp. 103 to 105, for an account of the organization of this board. For further information see also MONTHLY REVIEW for May, pp. 54 to 58; and this issue, pp. 54 to 57.

the dues to be assessed, and specifying the officers to be elected and the method of election.

Following the adoption of this report, Victor F. Gannon, secretary of the Employers' Association of Chicago, spoke very briefly on the utilization of men past the prime of life. He stated that in Chicago 15,210 such men have been placed by the association in positions where they are partly or wholly supporting themselves and those dependent upon them, and that 97 per cent have made good. He added that 94 per cent of the men sent out to positions are put to work and that "employers in the city of Chicago alone have paid in the last 10 months better than $3,700,000 in salaries to the men who thought their possibilities in the commercial world at an end."

Owing to the delay in receiving copies of several of the addresses made at the conference, it is not possible to give a complete summary at this time. However, the proceedings in full will be made available in bulletin form by the bureau as soon as practicable after receipt of all the papers.

INDUSTRIAL SERVICE CONFERENCE, MILWAUKEE.

The Industrial Service Conference held at Milwaukee April 25–27, under the auspices of the Industrial Commission of Wisconsin, was very successful both from the standpoint of attendance and from the character of the addresses presented. The conference was called for the purpose of bringing together manufacturers, superintendents, employment managers, safety engineers, physicians, and others interested in social work to discuss the more vital labor and social problems which are now confronting the industrial world.

The addresses and discussions covered a wide range of subjects, such as hours of labor and production, reduction of labor turnover, physical examination of employees, factory hygiene, and safety. The United States Commissioner of Labor Statistics gave an address on the subject of factory hygiene.

TERMS OF EMPLOYMENT OF FARM LABOR.

The following tabulation taken from the March, 1918, number of the Monthly Crop Report of the United States Bureau of Crop Estimates shows, by States, what percentage of the total hired farm labor of each State is hired by the month with board included; by the month without board; by the day, except extra harvest labor, with board and without board; by the day, extra harvest labor, with board

and without board. In the last two columns is shown what percentage of all hired labor of the State is hired with board and without board, respectively. The figures are estimates based upon reports from crop reporters of the Bureau of Crop Estimates.

State and division.	By month.		By day, except extra harvest labor.		Extra harvest labor.		Percentage of all labor, hired—	
	With board.	Without board.	With board.	Without board.	With board.	Without board.	With board.	Without board.
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
Maine	31	14	25	12	10	8	66	34
New Hampshire	35	12	18	19	9	7	62	38
Vermont	52	14	13	6	9	6	74	26
Massachusetts	47	10	6	20	7	10	60	40
Rhode Island	30	20	.....	45	.....	5	30	70
Connecticut	38	17	10	20	6	9	54	46
New York	40	20	11	13	9	7	60	40
New Jersey	30	20	10	23	6	11	46	54
Pennsylvania	40	14	20	9	11	6	71	29
North Atlantic	39.3	16.5	14.2	13.7	9.0	7.3	62.5	37.5
Delaware	45	10	17	15	8	5	70	30
Maryland	43	6	24	15	9	3	76	24
Virginia	27	12	25	19	10	7	62	38
West Virginia	23	12	28	15	15	7	66	34
North Carolina	30	14	23	16	11	6	64	36
South Carolina	39	21	10	17	4	9	53	47
Georgia	37	22	14	13	8	6	59	41
Florida	25	15	8	38	5	9	38	62
South Atlantic	33.7	17.2	17.4	16.6	8.3	6.8	59.4	40.6
Ohio	38	15	19	11	12	5	69	31
Indiana	40	19	14	10	10	7	64	36
Illinois	50	14	12	10	10	4	72	28
Michigan	40	15	20	8	13	4	73	27
Wisconsin	55	13	14	6	9	3	78	22
North Central east of Mississippi River	44.8	15.1	15.5	9.2	10.8	4.6	71.1	28.9
Minnesota	56	5	16	2	19	2	91	9
Iowa	65	10	9	3	10	3	84	16
Missouri	41	14	16	10	13	6	70	30
North Dakota	51	3	15	4	26	1	92	8
South Dakota	55	3	14	2	24	2	93	7
Nebraska	62	10	11	3	12	2	85	15
Kansas	45	12	15	5	19	4	79	21
North Central west of Mississippi River	52.7	9.4	13.8	4.8	15.9	3.4	82.4	17.6
Kentucky	28	18	18	18	10	8	56	44
Tennessee	24	16	21	22	9	8	54	46
Alabama	32	21	17	19	5	6	54	46
Mississippi	31	14	13	22	11	9	55	45
Louisiana	16	21	14	29	8	12	38	62
Texas	31	18	11	21	11	8	53	47
Oklahoma	32	9	19	11	20	9	71	29
Arkansas	32	15	12	23	8	10	52	48
South Central	29.0	17.0	14.8	21.0	9.7	8.5	53.5	46.5
Montana	57	3	14	3	22	1	93	7
Wyoming	75	2	11	1	9	2	95	5
Colorado	40	10	16	7	17	10	73	27
New Mexico	55	11	14	11	4	5	73	27
Arizona	22	13	22	20	16	7	60	40
Utah	25	10	12	22	21	10	58	42
Nevada	80	.....	.....	.....	20	.....	80	20
Idaho	47	6	21	3	22	1	90	10
Washington	44	12	18	8	14	4	76	24
Oregon	38	9	11	8	26	8	75	25
California	21	11	11	28	17	12	49	51
Far Western	37.4	9.5	13.7	14.9	16.9	7.6	68.0	32.0
United States	36.1	15.5	15.3	15.7	10.5	6.9	61.9	38.1

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of April, 1918, and in cases where figures are available, for the corresponding month in 1917. Figures are given from 172 public employment offices in 36 States and the District of Columbia—Federal employment offices in 28 States and the District of Columbia, Federal-State employment offices in 9 States, a Federal-State-county-municipal employment office in one State, a Federal-State-municipal employment office in one State, Federal-municipal employment offices in 2 States, State employment offices in 14 States, State-county-municipal employment offices in one State, State-municipal employment offices in 2 States, municipal employment offices in 5 States, and a municipal-private employment office in 1 State. Figures from 2 Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.
ALABAMA.												
Birmingham (Fed.)	.....	385	.....	10,115	.....	[1] 1,188	.....	(2)	.....	926	.....	601
Mobile (Fed.)	.....	36	.....	450	.....	[1] 279	.....	(2)	.....	139	.....	139
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,075	.....	740
CALIFORNIA.												
Fresno (Sta.)	.....	710	.....	1,281	.....	672	.....	(2)	.....	1,315	.....	1,175
Los Angeles (Fed.-Sta.-Mun.)	3,422	4,677	6,974	8,846	2,377	3,030	(2)	(2)	6,195	7,781	5,478	6,760
Oakland (Sta.)	979	2,300	1,261	5,061	562	1,495	582	(2)	1,280	3,206	1,607	2,728
Sacramento (Sta.)	406	730	983	3,925	198	1,331	282	(2)	803	1,736	282	1,291
San Francisco (Fed.)[3]	153	11,184	582	31,327	[1] 1,276	12,944	(2)	(2)	582	20,407	295	17,119
San Francisco (Sta.)	2,192	4,047	1,394	8,817	2,334	2,511	1,508	(2)	3,928	7,471	2,741	6,168
San Jose (Sta.)	.....	386	.....	479	.....	319	.....	(2)	.....	365	.....	191
Total	.....	.....	.....	.....	.....	.....	.....	.....	12,788	42,281	9,803	35,375
COLORADO.												
Colorado Springs (Sta.)	(2)	639	750	639	[1] 631	[1] 597	(2)	(2)	(2)	547	588	547
Denver (Fed.)	8	93	28	850	[1] 75	[1] 530	(2)	(2)	10	875	6	645
Denver No. 1 (Sta.)	(2)	763	673	763	[1] 530	[1] 773	(2)	(2)	(2)	412	493	412
Denver No. 2 (Sta.)	(2)	706	666	706	[1] 548	[1] 631	(2)	(2)	(2)	456	431	456
Pueblo (Sta.)	(2)	704	489	704	[1] 490	[1] 616	(2)	(2)	(2)	589	470	589
Total	.....	.....	.....	.....	.....	.....	.....	.....	10	2,879	1,988	2,649
CONNECTICUT.												
Bridgeport (Fed.-Sta.)	(2)	(2)	745	1,083	[1] 972	[1] 1,086	(2)	(2)	(2)	(2)	676	891
Hartford (Sta.)	(2)	(2)	1,385	1,461	[1] 1,537	[1] 1,571	(2)	(2)	(2)	(2)	1,061	1,150
New Haven (Sta.)	(2)	(2)	989	970	[1] 1,211	[1] 1,021	(2)	(2)	(2)	(2)	836	843
Norwich (Sta.)	(2)	(2)	263	333	[1] 280	[1] 395	(2)	(2)	(2)	(2)	245	327
Waterbury (Sta.)	(2)	(2)	190	288	[1] 169	[1] 438	(2)	(2)	(2)	(2)	113	243
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	(2)	2,931	3,463

[1] Number applying for work. [2] Not reported. [3] 1918 figures equal totals for district.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.
DISTRICT OF COLUMBIA.												
Washington (Fed.)	48	471	56	5,221	[1] 203	4,709	(2)	(2)	80	5,702	63	5,234
FLORIDA.												
Jacksonville (Fed.)	(2)	17	(2)	1,050	(2)	[1] 477	(2)	(2)	(2)	452	(2)	361
Miami (Fed.)	(2)	1	(2)	67	(2)	[1] 68	(2)	(2)	(2)	68	(2)	68
Pensacola (Fed.)	.....	1	.....	60	.....	[1] 5	.....	(2)	.....	2	.....	(2)
Tampa (Fed.)	.....	6	.....	750	.....	[1] 721	.....	(2)	.....	721	.....	637
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	1,243	(2)	1,066
GEORGIA.												
Atlanta (Fed.-Sta.)	.....	139	.....	2,348	.....	[1] 741	.....	(2)	.....	688	.....	688
Macon (Fed.)	.....	24	.....	439	.....	[1] 70	.....	(2)	.....	22	.....	22
Savannah (Fed.)	(2)	6	(2)	284	(2)	[1] 46	(2)	(2)	(2)	28	(2)	11
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	738	(2)	721
IDAHO.												
Moscow (Fed.)	12	25	13	250	[1] 17	[1] 28	(2)	(2)	16	28	12	28
ILLINOIS.												
Alton (Fed.)	.....	19	.....	384	.....	[1] 70	.....	(2)	.....	70	.....	38
Aurora (Fed.)	.....	105	.....	350	.....	[1] 367	.....	(2)	.....	246	.....	190
Bloomington (Fed.-Sta.)	.....	235	.....	277	.....	[1] 223	.....	(2)	.....	202	.....	132
Chicago (Fed.)	619	2,179	3,370	3,989	[2] 2,777	[1] 6,609	(2)	(2)	2,575	14,455	2,375	13,338
Chicago (Sta.)	5,535	4,984	14,327	16,474	14,690	8,164	1,306	8,271	15,138	15,864	12,189	13,097
Danville (Fed.-Sta.)	.....	279	.....	853	.....	[1] 338	.....	(2)	.....	326	.....	316
Decatur (Fed.-Sta.)	.....	142	.....	272	.....	[1] 157	.....	(2)	.....	135	.....	111
East St. Louis (Fed.-Sta.)	379	838	854	1,310	353	418	394	602	727	1,002	701	972
Galesburg (Fed.)	.....	106	.....	1,100	.....	[1] 285	.....	(2)	.....	152	.....	130
Joliet (Fed.)	.....	96	.....	401	.....	[1] 263	.....	(2)	.....	225	.....	159
Peoria (Fed.-Sta.)	996	1,070	1,423	1,728	172	215	906	1,143	1,049	1,358	1,044	1,357
Quincy (Fed.)	.....	19	.....	202	.....	[1] 81	.....	(2)	.....	19	.....	11
Rockford (Fed.-Sta.)	780	880	1,181	1,427	649	863	264	338	858	1,053	808	999
Rock Island-Moline (Fed.-Sta.)	619	1,268	1,282	4,721	522	1,209	317	1,472	377	2,629	648	2,381
Springfield (Fed.-Sta.)	565	706	675	1,281	202	258	427	616	594	827	553	713
Total	.....	.....	.....	.....	.....	.....	.....	.....	21,318	38,563	18,318	33,944
INDIANA.												
Evansville (Sta.)	192	179	357	763	[1] 591	(2)	(2)	(2)	409	606	357	603
Fort Wayne (Sta.)	429	740	620	1,201	112	(2)	462	(2)	717	1,062	574	1,062
Indianapolis (Fed.)	191	141	868	1,016	[1] 783	[1] 1,231	(2)	(2)	586	1,111	522	1,011
Indianapolis (Sta.)	1,430	1,342	1,430	1,369	1,366	1,275	64	67	(2)	1,398	(2)	1,240
Terre Haute (Sta.)	151	125	409	561	[1] 376	428	(2)	75	356	503	352	493
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,068	4,590	1,805	4,409
IOWA.												
Cedar Rapids (Fed.)	.....	49	.....	174	.....	[1] 169	.....	(2)	.....	135	.....	105
Davenport (Fed.-Sta.)	.....	286	.....	941	.....	504	.....	79	.....	511	.....	290
Des Moines (Fed.-Sta.)	68	321	357	793	111	[1] 713	19	(2)	113	585	77	592
Mason City (Fed.)	.....	73	.....	429	.....	[1] 169	.....	(2)	.....	158	.....	85
Ottumwa (Fed.)	.....	93	.....	204	.....	[1] 128	.....	(2)	.....	105	.....	52
Sioux City (Fed.)	.....	226	.....	332	.....	[1] 326	.....	(2)	.....	248	.....	262
Waterloo (Fed.)	.....	250	.....	413	.....	[1] 472	.....	(2)	.....	329	.....	270
Total	.....	.....	.....	.....	.....	.....	.....	.....	113	2,071	77	1,296

[1] Number applying for work. [2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr. 1917.	Apr. 1918.	Apr. 1917.	Apr. 1918.
KANSAS.												
Dodge City (Fed.)	.....	8	.....	12	.....	[1] 9	.....	(2)	.....	8	.....	8
Hutchinson (Fed.)	.....	106	.....	970	.....	[1] 156	.....	(2)	.....	73	.....	65
Topeka (Fed.-Sta.)	143	52	165	101	185	140	10	6	156	53	141	49
Wichita (Fed.)	.....	64	.....	181	.....	[1] 488	.....	(2)	.....	181	.....	165
Total	.....	.....	.....	.....	.....	.....	.....	.....	156	315	141	287
KENTUCKY.												
Louisville (Sta.)	261	130	261	106	[1] 343	[1] 124	(2)	(2)	261	106	261	106
Louisville (Mun.-Priv.)	(2)	259	639	586	340	134	546	266	511	302	206	182
Total	.....	.....	.....	.....	.....	.....	.....	.....	772	408	467	288
LOUISIANA.												
New Orleans (Fed.-Sta.)	60	191	469	4,510	[1] 480	571	(2)	(2)	489	3,322	111	3,218
MAINE.												
Portland (Fed.)	.....	5	.....	220	.....	[1] 47	.....	(2)	.....	8	.....	(2)
MARYLAND.												
Baltimore (Fed.)	67	489	177	2,764	[1] 259	[1] 7,900	(2)	(2)	109	5,289	109	3,611
MASSACHUSETTS.												
Boston (Fed.)	(2)	1,292	(2)	9,526	(2)	[1] 12,379	(2)	(2)	(2)	4,115	(2)	3,487
Boston (Sta.)	2,323	2,158	2,614	2,551	[1] 1,356	[1] 1,643	(2)	(2)	[3] 3,495	[3] 3,718	1,552	1,628
Springfield (Sta.)	1,139	982	1,428	1,237	[1] 466	[1] 445	(2)	(2)	[3] 1,560	[3] 1,464	1,030	850
Worcester (Sta.)	1,110	1,157	1,465	1,521	[1] 700	[1] 615	(2)	(2)	[3] 1,601	[3] 1,430	806	762
Total	.....	.....	.....	.....	.....	.....	.....	.....	6,656	10,727	3,388	6,727
MICHIGAN.												
Battle Creek (Sta.)	114	230	160	725	[1] 119	520	(2)	77	114	597	114	597
Bay City (Sta.)	69	48	126	[4] 148	[1] 89	141	(2)	18	70	159	70	148
Detroit (Fed.)	54	1,739	392	4,479	[1] 356	[1] 2,303	(2)	(2)	356	2,064	356	1,931
Detroit (Sta.)	826	2,400	7,977	6,210	(2)	6,003	(2)	150	(2)	6,210	7,751	7,153
Flint (Sta.)	948	238	948	329	[1] 948	307	(2)	61	948	279	948	266
Grand Rapids (Sta.)	574	774	980	1,680	[1] 978	1,299	(2)	321	943	1,604	943	1,505
Jackson (Sta.)	516	643	941	1,114	[1] 939	685	(2)	187	926	845	918	774
Kalamazoo (Sta.)	294	195	396	623	[1] 410	560	(2)	66	394	601	394	492
Lansing (Sta.)	62	104	328	601	[1] 171	486	(2)	76	171	560	171	560
Muskegon (Sta.)	99	51	271	365	[1] 121	236	(2)	100	114	289	103	267
Saginaw (Sta.)	138	164	728	590	[1] 619	370	(2)	82	619	427	619	427
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,655	13,635	12,387	13,120
MINNESOTA.												
Duluth (Sta.)	(2)	(2)	(2)	1,855	(2)	(2)	(2)	(2)	(2)	1,069	942	1,059
Minneapolis (Fed.)	49	168	55	705	[1] 229	[1] 418	(2)	(2)	38	133	38	131
Minneapolis (Sta.)	(2)	1,971	(2)	2,745	(2)	(2)	(2)	2,340	(2)	2,321	2,071	1,884
St. Paul (Sta.)	(2)	(2)	(2)	797	(2)	(2)	(2)	(2)	(2)	727	1,285	713
Total	.....	.....	.....	.....	.....	.....	.....	.....	38	4,250	4,336	3,783
MISSISSIPPI.												
Gulfport (Fed.)	.....	9	.....	577	[1] 51	[1] 156	(2)	(2)	.....	99	.....	79

[1] Number applying for work. [2] Not reported. [4] Numbers of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.
MISSOURI.												
Kansas City (Fed.-Sta.)	1,157	1,651	2,168	5,131	977	[1] 3,587	1,033	(2)	2,010	3,160	1,794	3,030
Sikeston (Fed.)	.....	(2)	.....	135	.....	(2)	.....	(2)	.....	(2)	.....	78
St. Joseph (Sta.)	(2)	(2)	1,276	1,515	[1] 1,067	[1] 1,021	(2)	(2)	1,065	1,020	1,065	1,020
St. Louis (Fed.-Sta.)	415	416	1,115	5,063	397	[1] 3,073	8	(2)	405	2,967	393	2,934
St. Charles (Fed.)	.....	7	.....	9	.....	[1] 12	.....	(2)	.....	12	.....	12
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,480	7,159	3,252	7,074
MONTANA.												
Butte (Mun.)	(2)	(2)	360	653	[1] 520	[1] 618	(2)	(2)	400	(2)	350	523
NEBRASKA.												
Lincoln (Fed.-Sta.)	.....	357	.....	395	.....	[1] 399	.....	(2)	.....	399	.....	376
Omaha (Fed.-Sta.-Co.-Mun.)	1,010	1,322	1,698	2,576	[1] 1,545	[1] 1,926	(2)	(2)	1,371	1,539	1,237	1,451
Total	.....	.....	.....	.....	.....	.....	.....	.....	1,371	1,938	1,237	1,827
NEW JERSEY.												
Camden (Fed.)	.....	232	.....	1,158	.....	[1] 1,472	.....	(2)	.....	779	.....	679
Jersey City (Fed.-Sta.)	(2)	193	(2)	1,096	(2)	[1] 941	(2)	(2)	(2)	577	(2)	421
Newark (Fed.-Sta.)	(2)	2,491	(2)	12,727	(2)	12,040	(2)	(2)	(2)	8,556	(2)	7,370
Orange (Fed.-Sta.)	(2)	412	(2)	806	(2)	255	(2)	(2)	(2)	386	(2)	354
Total	.....	.....	.....	.....	.....	.....	.....	.....	(2)	10,298	(2)	8,824
NEW YORK.												
Albany (Sta.)	723	939	1,028	1,243	605	475	309	323	1,041	1,079	597	708
Buffalo (Fed.)	1,501	228	2,291	2,920	1,972	[1] 1,529	(2)	(2)	2,568	1,596	1,750	1,359
Buffalo (Sta.)	1,493	1,965	2,397	4,814	1,875	2,501	157	164	2,566	3,461	1,727	2,657
New York City (Sta.)	1,935	3,119	2,507	4,703	1,489	2,310	1,761	1,168	2,702	4,156	1,698	2,532
New York City (Mun.)	2,663	2,031	3,051	2,160	2,307	1,247	2,342	1,797	3,885	2,700	2,189	1,741
Rochester (Sta.)	1,874	2,066	2,616	3,476	977	1,378	571	703	2,192	2,428	1,525	1,245
Syracuse (Sta.)	1,536	1,763	2,336	2,682	865	1,087	274	341	1,672	1,769	1,231	1,298
Total	.....	.....	.....	.....	.....	.....	.....	.....	16,626	17,099	10,517	11,540
NORTH DAKOTA.												
Fargo (Fed.)	.....	453	.....	654	.....	[1] 775	.....	(2)	.....	480	.....	471
OHIO.												
Akron (Sta.-Mun.)	(2)	(2)	2,542	3,446	766	1,140	1,509	2,095	1,945	2,746	1,710	2,312
Athens (Sta.-Mun.)	.....	(2)	.....	57	.....	28	.....	46	.....	52	.....	47
Canton (Sta.-Mun.)	.....	(2)	.....	707	.....	483	.....	231	.....	655	.....	184
Chillicothe (Sta.-Mun.)	.....	(2)	.....	596	.....	363	.....	299	.....	538	.....	463
Cincinnati (Sta.-Mun.)	(2)	(2)	2,697	4,064	1,645	1,448	2,717	2,945	2,264	3,186	1,662	2,730
Cleveland (Fed.)	19	264	21	1,582	[1] 153	[1] 616	(2)	(2)	99	481	35	208
Cleveland (Sta.-Mun.)	(2)	(2)	8,105	11,158	2,655	3,163	8,655	8,324	7,088	9,318	5,943	7,997
Columbus (Sta.-Mun.)	(2)	(2)	3,137	4,771	717	1,430	2,603	3,357	2,709	4,162	2,330	3,344
Dayton (Sta.-Mun.)	(2)	(2)	1,589	3,164	772	1,840	1,112	1,535	1,318	2,588	1,115	2,317
Youngstown (Sta.-Mun.)	.....	(2)	.....	417	.....	188	.....	37	.....	214	.....	173
Fremont (Sta.-Mun.)	.....	(2)	.....	587	.....	296	.....	165	.....	341	.....	274
Mansfield (Sta.-Mun.)	.....	(2)	.....	1,170	.....	419	.....	169	.....	577	.....	320
Marietta (Sta.-Mun.)	.....	(2)	.....	241	.....	156	.....	103	.....	241	.....	165
Marion (Sta.-Mun.)	.....	(2)	.....	639	.....	466	.....	371	.....	613	.....	502
Portsmouth (Sta.-Mun.)	.....	(2)	.....	980	.....	508	.....	311	.....	690	.....	451
Sandusky (Sta.-Mun.)	.....	(2)	.....	228	.....	158	.....	67	.....	183	.....	122

[1] Number applying for work. [2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918—Continued

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.
OHIO—concluded.												
Springfield (Sta.-Mun.)	.....	(1)	.....	475	.....	288	.....	431	.....	500	.....	325
Steubenville (Sta.-Mun.)	.....	(1)	.....	777	.....	362	.....	363	.....	622	.....	488
Tiffin (Sta.-Mun.)	.....	(1)	.....	411	.....	309	.....	117	.....	311	.....	254
Toledo (Sta.-Mun.)	(1)	(1)	3,219	5,048	1,132	1,456	3,269	4,144	2,853	4,673	2,415	4,056
Washington C. H. (Sta.-Mun.)	.....	(1)	.....	126	.....	80	.....	56	.....	98	.....	75
Youngstown (Sta.-Mun)	(1)	(1)	1,520	2,359	735	860	986	1,859	1,402	2,239	1,267	1,786
Zanesville (Sta.-Mun.)	.....	(1)	.....	254	.....	244	.....	156	.....	313	.....	220
Total	.....	.....	.....	.....	.....	.....	.....	.....	19,679	35,347	16,477	29,337
OKLAHOMA.												
Enid (Fed.)	.....	10	.....	23	.....	[2] 70	.....	(1)	.....	30	.....	28
Enid (Sta.)	156	109	156	173	[2] 134	[2] 143	(1)	(1)	129	124	129	117
Muskogee (Fed.)	.....	10	.....	22	.....	[2] 65	.....	(1)	.....	40	.....	36
Muskogee (Sta.)	250	322	262	396	[2] 383	[2] 443	(1)	(1)	262	446	262	336
Oklahoma City (Fed.)	.....	40	.....	80	.....	[2] 477	.....	(1)	.....	75	.....	64
Oklahoma (Sta.)	253	218	449	615	[2] 451	[2] 477	(1)	(1)	447	457	404	405
Tulsa (Fed.)	.....	25	.....	54	.....	[2] 439	.....	(1)	.....	90	.....	80
Tulsa (Sta.)	742	603	1,312	1,182	[2] 1,194	[2] 770	(1)	(1)	1,194	666	1,194	634
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,032	1,928	1,989	1,700
OREGON.												
Portland (Fed.-Mun.)	1,118	2,357	2,534	10,445	[2] 898	5,100	(1)	272	(1)	5,896	2,130	5,760
PENNSYLVANIA.												
Altoona (Sta.)	(1)	231	164	3,166	37	[2] 1,393	19	(1)	29	1,111	24	1,067
Erie (Sta.)	.....	171	.....	895	.....	161	.....	53	.....	189	.....	156
Harrisburg (Sta.)	(1)	217	366	1,953	276	400	111	168	299	676	299	556
Johnstown (Sta.)	(1)	59	145	1,131	71	297	13	1	76	237	58	224
New Castle (Sta.)	.....	45	.....	221	.....	[2] 32	.....	(1)	.....	28	.....	28
New Kensington (Sta.)	.....	60	.....	189	.....	187	.....	(1)	.....	195	.....	195
Philadelphia (Fed.)	198	395	820	10,682	[2] 1,650	[2] 15,399	(1)	(1)	1,099	11,769	1,033	11,191
Philadelphia (Sta.)	(1)	1,109	1,009	8,977	643	8,746	476	200	767	6,095	655	6,410
Pittsburgh (Fed.)	70	95	957	5,660	[2] 647	[2] 834	(1)	(1)	230	757	212	469
Pittsburgh (Sta.)	(1)	465	1,436	5,995	584	3,720	161	205	636	2,995	553	2,829
Scranton (Sta.)	.....	44	.....	224	.....	93	.....	4	.....	43	.....	43
Williamsport (Sta.)	.....	23	.....	632	.....	182	.....	7	.....	167	.....	36
York (Sta.)	.....	79	.....	409	.....	377	.....	15	.....	136	.....	119
Total	.....	.....	.....	.....	.....	.....	.....	.....	3,139	27,998	2,804	25,713
RHODE ISLAND.												
Providence (Fed.)	.....	51	.....	4,529	.....	[2] 1,749	.....	(1)	.....	1,374	.....	1,093
Providence (Sta.)	243	208	364	308	302	322	146	63	(1)	308	364	308
Total	.....	.....	.....	.....	.....	.....	.....	.....	(1)	1,682	364	1,311
SOUTH CAROLINA.												
Charleston (Fed.)	(1)	12	(1)	418	(1)	[2] 406	(1)	(1)	(1)	334	(1)	334
TEXAS.												
Dallas (Mun.)	211	82	468	1,489	[3] 273	[4] 177	9	7	479	183	497	168
Ft. Worth (Mun.)	159	262	343	481	[5] 1,193	(1)	69	(1)	214	341	204	338
Galveston (Fed.)	8	19	10	251	31	[2] 100	(1)	(1)	45	143	26	36
Total	.....	.....	.....	.....	.....	.....	.....	.....	738	667	637	542

[1] Not reported.
[2] Number applying for work.
[3] Includes 172 transients.
[4] Includes 58 transients.
[5] Includes 963 unwritten registrations.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, APRIL, 1917 AND 1918—Concluded.

UNITED STATES—Concluded.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.	Apr., 1917.	Apr., 1918.
VIRGINIA.												
Richmond (Mun.)	246	178	378	204	451	234	(1)	(1)	468	252	194	91
WASHINGTON.												
Bellingham (Fed.-Mun.)	212	117	444	480	228	163	(1)	(1)	272	212	232	138
Everett (Fed.)	.....	16	.....	177	.....	[2] 26	.....	(1)	.....	12	.....	2
Everett (Mun.)	(1)	(1)	(1)	362	(1)	(1)	(1)	(1)	(1)	279	360	232
North Yakima (Fed.)	473	477	935	870	[2] 1,107	[2] 1,000	(1)	(1)	845	817	755	788
Seattle (Fed.)	214	501	434	22,603	[2] 1,381	[2] 11,801	(1)	(1)	237	9,464	215	8,106
Seattle (Mun.)	4,259	6,450	6,829	11,334	(1)	(1)	(1)	(1)	6,936	11,392	6,344	10,076
Spokane (Fed.)	160	135	256	980	[2] 418	[2] 1,303	(1)	(1)	231	439	228	415
Spokane (Mun.)	2,016	2,192	2,968	2,446	(1)	(1)	(1)	(1)	2,942	2,410	2,869	2,395
Tacoma (Fed.-Mun.)	.....	655	.....	1,426	.....	[2] 2,866	.....	(1)	.....	1,268	.....	1,173
Walla Walla (Fed.)	183	262	261	291	[2] 493	[2] 272	(1)	(1)	213	251	155	225
Wenatchee (Fed.)	.....	183	.....	217	.....	[2] 182	.....	(1)	.....	166	.....	152
Total	.....	.....	.....	.....	.....	.....	.....	.....	11,676	26,710	11,158	23,702
WISCONSIN.												
La Crosse (Sta.-Mun.)	185	134	223	221	[2] 283	[2] 172	(1)	(1)	182	134	109	84
Milwaukee (Sta.-Co.-Mun.)	2,284	2,303	3,906	4,992	3,196	3,281	(1)	(1)	3,389	3,450	2,435	2,197
Oshkosh (Sta.-Mun.)	199	184	249	284	[2] 215	[2] 163	(1)	(1)	149	127	97	122
Superior (Sta.-Mun.)	329	313	681	788	639	696	(1)	(1)	640	739	177	701
Total	.....	.....	.....	.....	.....	.....	.....	.....	4,360	4,450	2,818	3,104
WYOMING.												
Cheyenne (Fed.)	.....	27	.....	188	.....	[2] 221	.....	(1)	.....	234	.....	83
Grand total	.....	.....	.....	.....	.....	.....	.....	.....	113,228	279,895	109,863	242,974

CANADA.

QUEBEC.												
Montreal (Prov.)	349	220	987	557	360	277	(1)	(1)	556	434	461	360
Quebec (Prov.)	(1)	44	247	178	[2] 175	[2] 119	(1)	(1)	(1)	105	120	83
Total	.....	.....	.....	.....	.....	.....	.....	.....	556	539	581	443

[1] Not reported. [2] Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN APRIL, 1918.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in April, 1918, from representative establishments in 13 industries. Comparing the figures of April of this year with those of identical establishments for April, 1917, it appears that in 6 industries there was an increase in the number of people employed and in 7 a decrease. Men's ready-made clothing shows an increase of 4 per cent while woolen and cigar manufacturing show increases of 3.8 per cent and 3.5 per cent.

Silk, boots and shoes, and automobile manufacturing show decreases of 9 per cent, 6.5 per cent, and 6.4 per cent, respectively.

All of the 13 industries show an increase in the total amount of pay roll for April, 1918, as compared with April, 1917. The most important of these—47.9 per cent and 44.4 per cent—are shown in woolen, and car building and repairing. Six show increases ranging from 25.2 per cent to 30.7 per cent, while the remaining 5 range from 3.1 per cent to 22.6 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN APRIL, 1917, AND APRIL, 1918.

Industry.	Establishments reporting for April, both years.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase.
			April, 1917.	April, 1918.		April, 1917.	April, 1918.	
Automobiles	50	1 week	125,407	117,352	−6.4	2,761,526	2,846,438	3.1
Boots and shoes	71	do	67,103	62,710	−6.5	913,540	1,034,408	13.2
Car building and repairing	45	½ month	50,977	52,168	+2.3	1,692,431	2,444,123	44.4
Cigars	66	1 week	21,025	21,770	+3.5	236,308	295,894	25.2
Cotton finishing	16	do	14,131	13,763	−2.6	193,235	241,886	25.2
Cotton manufacturing	51	do	50,317	48,779	−3.1	541,528	695,960	28.5
Hosiery and underwear	57	do	30,532	30,325	−0.7	311,817	407,444	30.7
Iron and steel	100	½ month	188,116	193,603	+2.9	7,576,941	9,871,427	30.3
Leather	38	1 week	19,435	18,564	−4.5	286,327	342,356	19.6
Men's ready-made clothing	37	do	24,477	25,451	+4.0	362,876	444,746	22.6
Paper	52	do	25,131	25,154	+0.1	372,650	481,314	29.2
Silk	37	2 weeks	15,171	13,801	−9.0	347,021	379,247	9.3
Woolen	50	1 week	48,764	50,598	+3.8	626,970	927,104	47.9

In the year's interval between April, 1917, and April, 1918, the per capita earnings, as distinguished from wage rates, have increased as follows:

	Per cent
Automobiles	10
Boots and shoes	21
Car building and repairing	41
Cigars	21
Cotton finishing	29
Cotton manufacturing	33
Hosiery and underwear	32
Iron and steel	27
Leather	25
Men's ready-made clothing	18
Paper	29
Silk	20
Woolen	43

These percentages have been computed from the foregoing table. The chief factor entering into this change in per capita earnings is the increase in wage rates which has taken place in the year; the other factor to be considered is the regularity of employment. Changes in wage rates have been reported from month to month in

the MONTHLY REVIEW. No information is available as to regularity of employment.

The table below shows the number of persons actually working on the last full day of the reported pay period in April, 1917, and April, 1918. The number of establishments reporting on this question is small and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN APRIL, 1917, AND APRIL, 1918.

Industry.	Establishments reporting for April both years.	Period of pay roll.	Number actually working on last full day of reported pay period in April.		Per cent of increase (+) or decrease (−).
			1917	1918	
Automobiles	28	1 week	78,878	69,533	−11.9
Boots and shoes	21	do	12,424	11,180	−10.0
Car building and repairing	44	½ month	44,056	44,663	+ 1.4
Cigars	20	1 week	5,319	4,765	−10.4
Cotton finishing	12	do	10,002	9,668	− 3.3
Cotton manufacturing	33	do	23,940	22,661	− 5.3
Hosiery and underwear	18	do	12,441	11,933	− 4.1
Iron and steel	77	½ month	141,741	145,432	+ 2.6
Leather	22	1 week	12,347	13,051	+ 5.7
Men's ready-made clothing	5	do	3,595	4,413	+22.8
Paper	15	do	6,054	6,206	+ 2.5
Silk	25	2 weeks	11,165	10,215	− 8.5
Woolen	38	1 week	37,018	38,501	+ 4.0

The figures in the following table show that in only one industry—automobile manufacturing—were there more persons on the pay roll in April, 1918, than in March, 1918; in 12 industries there was a decrease in the number of persons on the pay roll. The largest decreases—4.4 per cent and 3.7 per cent—are shown in cotton finishing and leather manufacturing, respectively.

Of the 13 industries reporting, 9 show increases and 4 decreases in the total amount of pay roll in April, 1918, as compared with March, 1918. In woolen, cotton finishing, cotton manufacturing, and silk, increases of 8.1 per cent, 3.7 per cent, 3.6 per cent, and 2.9 per cent, respectively, are shown.

Boots and shoes, men's ready-made clothing and leather manufacturing show decreases of 3.7 per cent, 3.5 per cent, and 2.6 per cent, respectively.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1918, AND APRIL, 1918.

Industry.	Establishments reporting for March and April.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (—).	Amount of pay roll in—		Per cent of increase (+) or decrease (—).
			March, 1918.	April, 1918.		March, 1918.	April, 1918.	
Automobiles	49	1 week	116,037	116,258	+0.2	$2,766,820	$2,823,064	+2.0
Boots and shoes	79	do	64,006	61,835	—3.3	1,061,258	1,021,926	—3.7
Car building and repairing	45	½ month	54,163	52,420	—3.2	2,456,986	2,444,123	—0.5
Cigars	66	1 week	22,699	22,263	—1.9	304,791	307,107	+0.8
Cotton finishing	16	do	14,392	13,763	—4.4	233,365	241,883	+3.7
Cotton manufacturing	53	do	50,485	49,448	—2.1	679,734	704,296	+3.6
Hosiery and underwear	53	do	28,751	28,747	(1)	375,429	381,808	+1.7
Iron and steel	100	½ month	184,924	184,198	—0.4	9,576,020	9,584,556	+0.1
Leather	37	1 week	18,360	17,675	—3.7	333,710	325,192	—2.6
Men's ready-made clothing	37	do	25,563	25,451	—0.4	460,851	444,746	—3.5
Paper	51	do	24,331	24,214	—0.5	469,606	466,870	+1.4
Silk	37	2 weeks	13,891	13,741	—1.1	367,059	377,825	+2.9
Woolen	50	1 week	50,692	50,450	—0.5	853,695	922,780	+8.1

[1] Less than one-half of 1 per cent decrease.

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for March and April, 1918. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MARCH, 1918, AND APRIL, 1918.

Industry.	Establishments reporting for March and April.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (—).
			March, 1918.	April, 1918.	
Automobiles	29	1 week	72,806	71,569	—1.7
Boots and shoes	21	do	11,720	11,311	—3.5
Car building and repairing	45	½ month	47,695	44,938	—5.8
Cigars	23	1 week	5,752	5,253	—8.7
Cotton finishing	11	do	9,810	9,198	—6.2
Cotton manufacturing	33	do	23,155	22,515	—2.8
Hosiery and underwear	18	do	11,408	11,293	—1.[illegible]
Iron and steel	77	½ month	143,458	141,967	—1.[illegible]
Leather	20	1 week	13,372	12,831	—4.1
Men's ready-made clothing	6	do	4,405	4,430	+0.[illegible]
Paper	15	do	6,055	6,200	+2.[illegible]
Silk	24	2 weeks	10,054	9,969	—0.[illegible]
Woolen	40	1 week	39,243	38,874	—1.[illegible]

CHANGES IN WAGE RATES.

In each of the 13 industries, there were establishments reporting increases in wage rates and in one—cigar manufacturing—a decrease. A number of firms did not answer the inquiry relating to wage rate changes, but in such cases it is probably safe to assume that no changes were made.

Automobiles: One plant reported an increase of 25 per cent, affecting 15 per cent of the employees. An increase of 10 per cent in the wages of the foundry skilled labor force, which equaled approximately 8 per cent of the factory force, was granted by one establishment. Eighty per cent of all employees in another plant received increases ranging from 7 per cent to 8.5 per cent, and about 90 per cent of the force in another establishment received an increase of approximately 10 per cent. The average productive hourly rate in one plant was increased 0.0067 cent. Another plant reported an increase, but gave no data.

Boots and shoes: One establishment reported an increase of 15 per cent, but failed to state the number affected. One plant granted increases of 14 per cent and 10 per cent, affecting 12½ per cent and 76½ per cent of the employees, respectively. Six plants gave a 10 per cent increase—four to all of the employees; one, to 81.2 per cent of the force; and one, to 80 per cent of the force. One firm gave a few increases, and another establishment reported an increase, but made no statement as to the amount of the increase or number affected.

Car building and repairing: An increase of 10 per cent was reported by one plant, affecting 38 per cent of the force.

Cigars: Reports from two factories show an increase—7½ per cent in one, and 5 per cent in the other—affecting the entire force in each. One establishment reported a general decrease of 4 per cent.

Cotton finishing: One establishment reported an increase of 30 per cent, but did not state the number affected. Eight plants granted an increase of 10 per cent, this affecting the entire force in three plants and 95 per cent of the employees in five plants.

Cotton manufacturing: An increase of 20 per cent was granted to all employees by one firm. One establishment reported an increase of 12½ per cent, affecting each operator, while the entire force in another plant received an increase of 11½ per cent. All employees in one establishment received increases ranging from 10 per cent to 13 per cent. Thirteen plants gave a 10 per cent increase—twelve to the whole force, and one to about half of the employees. An additional bonus of 8⅓ per cent to all "full-time" workers was granted by one mill, while in another mill the bonus was raised from 20 per cent to 25 per cent.

Hosiery and underwear: Two firms gave 75 per cent of the employees an increase, the increase being 20 per cent in one, and from 10 per cent to 20 per cent in the second. Seven establishments granted a 10 per cent increase, this affecting the entire force in six mills, and approximately all the employees in one mill; one mill reported an increase of about 10 per cent, but made no statement as

to the number of employees affected. An increase of 8⅓ per cent to the entire force was reported by one concern, and an increase of 5 per cent to all except the office force was granted by another.

Iron and steel: The entire force in three plants received an increase of 15 per cent. One firm increased the 40 per cent bonus to 55 per cent, which affected the entire force except the commissary employees. An increase of 10 per cent was reported by five establishments, affecting the whole force in two plants, all laborers and mechanical men in one, 70 per cent of the force in another, and 44 per cent of the employees in the fifth plant. An increase of 50 cents per day, amounting to about 15 per cent, was granted in one plant to all the men having a daily or weekly rate, which affected about 60 per cent of the employees. Another plant reported an increase of 25 cents per day to the entire force. All the employees but the salaried men in one establishment received an 8 per cent increase.

Leather: An increase of approximately 15 per cent, affecting about 50 per cent of the entire force, was granted by one establishment. Two plants reported an increase of 10 per cent, which affected all the employees in one plant and 70 per cent of the force in the other, while a third plant gave an increase to the entire force of approximately 10 per cent. About 40 per cent of the employees in one establishment received an increase of approximately 7 per cent. All the employees in three establishments received an increase of 5 per cent, while another plant granted an increase of 5 per cent and a 5 per cent bonus for all "full-time" workers, to 60 per cent of the men. Another plant reported an increase, but failed to state the amount of increase or number affected.

Men's ready-made clothing: An increase of 10 per cent, affecting almost the entire force, was granted by one firm, and an increase of about 10 per cent was reported by another, which gave no information as to the number affected.

Paper: An increase of approximately 20 per cent, affecting every employee, was reported by one establishment, and half of the force in another plant received a 15 per cent increase. One plant granted an increase of 10 per cent and another firm gave an 8 per cent increase, but neither gave the number affected. An average 5½ per cent increase was received by 70 per cent of the force in one establishment. Two firms granted an increase of 5 per cent, affecting the whole force in one plant, while the other gave no information as to the number receiving the increase. An increase of approximately 3 per cent to 50 per cent of the force was reported by one plant. The firemen, engineers, coal passers, and a few firemen's helpers, equaling about 9½ per cent of the force in another plant, received an increase of 2 per cent. One establishment reported an increase of 20 cents

per day for men and 10 cents per day for women; while another plant granted an increase of 1 cent to 2½ cents per hour to all on the force. A wage increase was reported by one other plant, but no further data were given.

Silk: Two mills reported a 15 per cent increase, this affecting the entire force in one plant and 25 per cent of the employees in the other; while another mill reported a bonus of 15 per cent. Four mills granted an increase of 10 per cent to all employees. The whole force in one concern received an increase of 7 per cent, and another establishment reported an increase of approximately 7 per cent, affecting practically the whole force.

Woolen: It is of significance to note that more than 96 per cent of the mills reporting in the woolen industry granted increases during the pay-roll period March 15 to April 15, 1918. One establishment reported an increase of 14½ per cent, but failed to state the number affected. The wages of all the employees in 46 mills were increased 10 per cent. The entire force in one establishment received increases ranging from 8 per cent to 10 per cent; while another mill gave a general increase of 8 per cent.

WORKMEN'S COMPENSATION.

WORKMEN'S COMPENSATION LEGISLATION OF 1918.

LAW OF VIRGINIA.

By the enactment of a compensation law the Legislature of Virginia at its recent session reduced by one the diminishing group of States retaining the old liability system, all of which lie in the southern section of the Union, with the single exception of the State of North Dakota. Some account was given in the MONTHLY REVIEW for November, 1917 (pp. 160, 161), of the draft of a bill submitted by a commission under the joint resolution of the general assembly of February 5, 1916. The report of this commission, received since the above-mentioned notice was prepared, is a pamphlet of 32 pages,[1] half of which is taken up with the draft of the bill submitted.

The report was signed by six of the seven members of the commission, the seventh feeling himself unable to support the measure as drafted, on the ground that employees of steam railways should not be included in any measure; nor were the rates of compensation proposed sufficiently high to meet his approval. This member was also in favor of exclusive State insurance.

The report opens with a summary statement of the activities of the commission, and of the present extent of compensation legislation in the United States. The failure of the liability system was pointed out, and the grounds for the present movement toward the compensation system and the essential features of the system were summarized, the conclusion being that "the compensation principle recognizes the substitution of a definite and certain measure of relief for the former uncertainties of redress through litigation, and this relief is provided for in terms of the loss of services." Against the waiting period contributed by the employee the employer contributes surgical and medical aid; against the right of action in damages, there is an assured, if limited, measure of compensation; against excessive recoveries in a minority of cases a fair compensation for all injuries is granted and so distributed as to give the greatest measure of relief.

[1] Senate Document No. 3, Communication from the governor transmitting the report of the Virginia commission on workmen's compensation. 1918.

The bill as drafted was amended by the legislature, the more important amendments being the entire exclusion of railroad service from the operation of the act—"any carriers whose motive power is steam and engaged in intrastate trade or commerce" being specifically proscribed—and the provision for the establishment of a system of raising an administrative fund by contributions from insurance carriers of every class, including self-insurers. The act is elective, but election is presumed in the absence of positive action to the contrary, and covers employment generally excepting domestic and farm labor and railroad service as above indicated. Public employment is included within the act. A waiting time of 14 days is fixed, after which benefits based upon 50 per cent of the weekly wages are to be paid, the maximum amount being $10 and the minimum $5. Death benefits continue not more than 300 weeks, while for total disability the period is fixed at 500 weeks, the total in either case not to exceed $4,000.

Administration is committed to a commission of three members, the salaries being $3,600 per annum instead of $4,000 as proposed by the bill. The act becomes effective January 1, 1919.

The measure became a law over the governor's veto, his objection being to the proposed method of administration, on the ground that the State should not be burdened with the expense of a commission. The bill was promptly passed over his veto, which was due to this single item, the principle being approved by him.

A single State legislature, that of Georgia, remains to convene in regular session this year (fourth Monday of June), and as it is one of the 10 States remaining without a compensation law, this presents the only possibility of an extension of legislation in this field during the current year.

AMENDMENTS TO EXISTING LAWS.

Amendments to existing laws during the current year, so far as known, have been few in number, but those at hand show a uniform trend toward liberalization. Thus, the law of Kentucky is made applicable to employers of three or more persons instead of to those of five or more, and the waiting time is reduced from two weeks to seven days. The weekly minimum in Massachusett for total disability is $5 instead of $4, and notices are invalidated by inaccuracies only when they are intentional and have actually caused deception; while the New York law is made applicable to all industries employing four or more workmen or operatives instead of only to hazardous employments.

In New Jersey the act of 1916 creating a workmen's compensation aid bureau was repealed and a new bureau created in the department of labor to be known as the workmen's compensation bureau. This

bureau will exercise the powers of the aid bureau, together with additional power and authority. Its chairman is the State commissioner of labor, while three deputy commissioners of compensation, one to act as secretary, and referees and other necessary employees make up its working force.

The foregoing act is described as a supplement to the compensation law of 1911, and while no specific statement is made to that effect its expenses are presumably to be met by the ordinary methods of appropriation. However, a second act relating to the subject of compensation requires employers of employees who die under circumstances which would give rise to claims for compensation if there were surviving dependents, but who leave no such dependents, to pay the sum of $400 for each such case, the amount so collected to be used by the commissioner of labor for the purposes set forth in the act above described.

REPORTS OF WORKMEN'S COMPENSATION COMMISSIONS.

NEW YORK.

In that portion of the recently issued Report of the New York State Industrial Commission for nine months ending June 30, 1916,[1] dealing with the business of the bureau of workmen's compensation, it appears that the number of policyholders of the State insurance fund increased from 8,507 in 1915 to 9,966 in 1916, while the amount of premiums in force rose from $674,973.64 on December 31, 1915, to $797,743.31 on December 31, 1916. The net premiums written during the year amounted to $2,048,128.91, and the total losses paid amounted to $762,436.38, while the addition to loss reserves was $1,127,792.82, making a total on December 31, 1916, of $2,008,228.03. The surplus at the close of the year was $253,179.44. It is stated that the State insurance fund is the second largest carrier of workmen's compensation insurance in the State, about 15 per cent of the total volume being carried by it. The loss ratio is given as 92.4 as against 64.6 in 1915. "The main cause of the increase was the abnormal activity of business, which resulted naturally in a rise in the accident rate." The expense ratio is given as 9.2 per cent, which "contrasts in a striking way with an average expense ratio of approximately 40 per cent for the stock companies and of somewhat less than 20 per cent for the mutual companies."

The total number of accidents reported by policyholders of the fund during the year ending December 31, 1916, is given as 21,086, an increase of 60 per cent over the total of the preceding year. The number of compensable cases was 6,923, including 163 death

[1] New York Industrial Commission, Annual Report, pp. 124-140. Albany, Apr. 17, 1917.

cases, 1 permanent total disability case, 651 permanent partial disability cases, and 6,108 temporary total disability cases. Medical or hospital service was furnished by the fund in 3,503 cases, the average cost per case being $15.92.

The following is a comparative statement of the New York State insurance fund for the years ending December 31, 1916 and 1917:[1]

Financial statement of the New York State insurance fund for the years ending December 31, 1916 and 1917.

Assets.	1916			1917		
Investments			$1,854,642.50			$2,680,155.00
Cash on deposit			251,403.68			382,517.83
Accrued interest			24,796.44			34,780.48
Policyholders' accounts			383,919.89			656,808.34
Total			2,514,762.51			3,754,261.65
Liabilities.						
Reserve for losses			2,008,228.03			3,020,862.22
Reserve for deferred claim expense			60,246.84			90,625.87
Reserve for unearned premiums			94,634.12			108,109.28
Reserve for expenses			98,474.08			135,982.06
Total			2,261,583.07			3,355,579.43
Surplus			253,179.44			398,682.22
Total			2,514,762.51			3,754,261.65
Income.						
Net premium income			2,048,128.91			2,694,851.17
Interest income:						
Interest received on investments, and accrued interest on investments	$84,546.80			$120,806.67		
Less accrued interest on investments Dec. 31,[2] and accrued interest on bonds acquired	21,320.82			30,421.02		
Net interest earned on investments		$63,225.98			$90,385.65	
Interest received on deposits, and accrued interest on deposits	3,460.60			8,575.66		
Less accrued interest on deposits, Dec. 31 [2]	959.60			822.70		
Net interest earned on deposits		2,501.00			7,752.96	
Total interest income			65,726.98			98,138.61
Miscellaneous income						885.72
Total income			2,113,855.89			2,793,875.50
Disbursements.						
Losses paid:						
Medical	123,640.44			209,192.80		
Temporary total disability	361,753.17			506,284.19		
Permanent total disability	232.52			1,376.50		
Permanent partial disability				15,363.90		
Dismemberment	196,846.39			280,553.04		
Death, funeral expenses	13,216.78			17,826.88		
Death, dependency	66,747.08			111,813.70		
Total losses paid		762,436.38			1,142,411.01	
Bank-exchange charges		564.66				
Profit-and-loss charges		195.59			236.23	
Administration expenses, year ending June 30					165,224.10	

[1] Data for the year 1917 has been taken from the April, 1918, issue of the monthly bulletin issued by the industrial commission, p. 167.

[2] This refers to the preceding year in each case.

Financial statement of the New York State insurance fund for the years ending December 31, 1916 and 1917—Concluded.

Disbursements—Concluded.	1916		1917	
Increase in reserves:				
For losses	$1,127,792.82		$1,012,634.19	
For deferred claim expense	33,833.89		30,379.03	
For unearned premiums	25,842.63		13,475.16	
For uncollectible policyholders' accounts			30,320.94	
For expenses	98,474.08		37,507.98	
Gross increase in reserves		$1,285,943.45		$1,124,317.30
Decrease in reserve for loss payment suspense			47.38	
Net increase in reserves				1,124,269.92
Total disbursements and increase in reserves		$2,049,140.08		$2,432,141.26
Surplus earned		64,715.81		361,734.24
Surplus, December 31 [1]		377,399.45		253,179.44
Total surplus		442,115.26		614,913.68
Add increase in value of investments		51,148.92		[2] 65,810.63
		493,264.18		549,103.05
Dividends allowed, year ending Dec. 31		240,084.74		150,420.83
Surplus, Dec. 31		253,179.44		398,682.22

[1] This refers to the preceding year in each case.
[2] This is a decrease in value of investments and is subtracted.

WISCONSIN.

The third annual report on workmen's compensation insurance, covering the year 1916, issued by the Industrial Commission of Wisconsin [1] notes the largest net premium income during the history of the compensation act, "due to increased industrial activities which carried with it an increase in pay rolls upon which insurance premiums are based." This premium income of insurance carriers amounted to $1,783,887, of which $1,746,031 had been earned on December 31, 1916. Sixty-six per cent of the total was carried by stock companies, 28 per cent by Wisconsin mutuals, 4 per cent by interinsurers, and 2 per cent by mutual companies organized in other States but doing business in Wisconsin. This increase in premium income was accompanied by an increase in industrial accidents and resulting compensation cost. The total amount paid or to be paid by insurance companies for accidents which occurred in 1916, according to this report, was $1,289,673, or 74 per cent of the premiums earned. Of the total compensation paid, $875,443 went as indemnities to the injured workmen, and $414,230, or 32 per cent, was expended for medical aid. The table following is a condensed statement of the business of the insurance companies in 1916.

[1] Industrial Commission of Wisconsin. Workmen's compensation insurance. Third annual report. [Madison] Sept. 1, 1917. 23 pp.

STATEMENT OF INSURANCE COMPANIES UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1916.

Insurance companies.	Net premium.	Earned premium.	Compensation and expenses incurred.								
			Compensation.				Expenses.			Total.	Per cent of earned premiums.
			Indemnity.[1]	Medical benefits.[1]	Total.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.	Per $1 of compensation.		
Wisconsin mutuals...	$504,475	$482,222	$201,525	$129,242	$330,767	68	$105,687	22	$0.32	$436,454	90
Foreign mutuals.....	33,708	41,574	13,513	6,971	20,484	49	12,038	29	.59	32,522	78
Interinsurers	66,461	72,405	40,120	14,331	54,451	75	21,455	30	.39	75,906	105
Stock companies.....	1,179,243	1,149,830	620,285	263,686	883,971	77	469,631	41	.53	1,353,602	118
Total..	1,783,887	1,746,031	875,443	414,230	1,289,673	74	608,811	35	.47	1,898,484	[2] 109

[1] Includes both the amount paid and that outstanding.
[2] The report explains that "this net loss of 9 per cent will be offset to a large degree, and practically entirely by the additional premiums which employers will pay on account of greater pay rolls actually expended than the estimated amount upon which the advanced premiums were based. This does not apply to each individual company, but to the total of all companies."

A table giving the Wisconsin pure premium experience on policies of 1915 issue shows an average pure premium cost of 79 cents per $100 of pay roll, as compared with 87 cents on policies issued in 1914. The combined pure premium cost on policies of 1913, 1914, and 1915 issues is given as 83 cents per $100 of pay roll.

It is stated that during 1916 about 550 employers were operating under the compensation act without carrying insurance, exemptions being issued by the industrial commission upon proper showing. Although comparatively few in number, the pay rolls of these employers represented about one-third of the entire wages paid to workmen under the compensation act. In 1916 their pay rolls amounted to $67,257,000, and compensation incurred amounted to $385,239, or 58 cents per $100 of pay roll. In explanation of the fact that this amount is much lower than the pure premium cost to insured companies, the report suggests that "the self-insured employers are chiefly large manufacturing plants; most of these plants have been thoroughly safeguarded, and many have active safety organizations. Furthermore, slightly injured workmen are often given light employment, and thus kept on the pay roll, instead of being paid compensation. Insured employers as a rule do not take their injured men back to work until they can fulfill their regular duties."

WYOMING.[1]

Under the compensation law of Wyoming the State treasurer has charge of the industrial accident fund, in which insurance is compulsory for certain groups of extrahazardous employments where

[1] Second Report of the Workmen's Compensation Department of the State of Wyoming. Laramie, 1918. 66 pages.

three or more workmen are employed in the same establishment. The first report covered a period of 18 months, ending September 30, 1916. An act of the legislature of 1917 directs annual reports covering the calendar year, but to avoid a hiatus the present report covers a period of 15 months from October 1, 1916, to December 31, 1917. Another change made by the same legislature reduced the rate of premium to be paid by employers from 2 per cent to 1½ per cent, the reduced rate being effective beginning with March 1, 1917.

During the period covered by the report 501 employers paid premiums into the fund, this being an increase of 260 over the number paying during the period covered by the first report. Approximately 20,000 employees now come within the provisions of the act. Forty-two of the 66 pages of the report are taken up by statements of the conditions of individual contributors' accounts, showing the balance at the beginning of the period, if any, the amount received as premiums, the amount paid out on orders of award, if any, and the balance or overdraft at the end of the year 1917. Of the 501 live accounts, only 24, or less than 5 per cent, were overdrawn at the end of the year. In the vast majority of cases, therefore, the individual accounts show a favorable balance, a number of the larger ones even to the extent of an accumulation of $5,000 or over, which permits a suspension of contributions under the law.

The amount contributed during the year as premiums was $218,605, and the amount paid out on orders was $99,598, or 45.6 per cent of the amount received as premiums. Of the total premium payments 51.9 per cent were contributed by the coal industry and 19.4 per cent by oil operators, leaving but 28.7 per cent for all other industries in the State. The fund shows a balance of $412,763 at the close of the year.

The following table presents a summary of the claims paid by orders of award, showing number and amount for the different classes, also the medical, court, and witness fees:

SUMMARY OF CLAIMS PAID BY ORDERS OF AWARD.

Claim.	Number of awards.	Amount.
Death	37	$35,443.84
Permanent total disability	1	1,400.00
Permanent partial disability	86	42,498.59
Temporary disability	639	20,255.60
Physicians' fees	54	586.40
Special court commissioners' fees	8	261.00
Witnesses' fees	3	284.50
	828	100,729.93

From the foregoing it appears that of the total amount awarded from the fund 35.6 per cent was for death claims, 1.4 per cent for permanent total disability, 42.7 per cent for permanent partial disa-

bility, and 20.2 per cent for temporary disability. These proportions can not be expected to correspond with the same classes of payments under other laws, in view of the fact that the awards for death are lump-sum payments to the widow or invalid widower, with small monthly payments to children under 16; a similar mode of payments applies to permanent total disability, while for permanent partial disability fixed lump sums are paid for specified injuries. No data are given showing the duration of disabilities. There is a summary of causes of fatal accidents, and tables showing industry and cause of accident nature of injury, and a summary of causes of accidents resulting in temporary disability by industry and causes.

LABOR LAWS.

COMPULSORY WORK LEGISLATION IN THE UNITED STATES AND CANADA.

The adoption of laws looking toward the useful employment of all the working forces of the population as a war emergency measure has received its most influential indorsement by the act of the Legislature of New York, whose bill on this subject was approved by Gov. Whitman on the 13th of May. West Virginia was the first State to enact a law of this type, followed by Maryland in the same year (1917), while this year the States of New Jersey and New York have taken similar steps. An order in council brings the Dominion of Canada under similar regulation.

The New York statute applies to all able-bodied males between the ages of 18 and 50, requiring them to "be habitually and regularly engaged in some lawful, useful, and recognized business, profession, occupation, trade or employment until the termination of the war." Such employment must continue for at least 36 hours per week, noncompliance with the law being punishable by a fine of $100 or three months' imprisonment, or both. Loitering in the streets, saloons, pool rooms, stores, etc., is considered prima facie evidence of violation of the act. Persons out of employment by reason of labor disputes and students are exempt from the operation of the law, but a claim of sufficient income for self-support and the support of dependents will not suffice.

The governor's approval was accompanied by a memorandum stating that the object of the measure was to require contributions by all able-bodied males toward a remedying of the conditions due to the present shortage of labor. Some doubt as to constitutionality was admitted, yet the measure was held to be justified if it would produce any advantage, however small, in view of the conditions involved in the prosecution of the war. Another point mentioned was the protection of the State against undesirable persons who might enter it to escape the operations of the law of New Jersey.

The Canadian order in council already mentioned bears date of April 4, 1918.

The first two sections of this order are as follows:

1. Every male person residing in the Dominion of Canada shall be regularly engaged in some useful occupation.

2. In any proceeding hereunder it shall be a defense that the person is—

(*a*) Under 16 or over 60 years of age.

(*b*) A bona fide student proceeding with his training for some useful occupation.

(*c*) A bona fide student in actual attendance at some recognized educational institution.

(*d*) Usually employed in some useful occupation and temporarily unemployed owing to differences with his employer common to similar employees with the same employer.

(*e*) Physically unable to comply with the provisions of the law as herein enacted.

(*f*) Unable to obtain within reasonable distance any kind of employment which he is physically able to perform at current wages for similar employment.

The third section provides a penalty for violation of the provisions of the order, punishment to be a fine of not more than $100 and in default of payment imprisonment for not more than six months either in jail or at a public institution or farm.

The fourth section relates to proceedings and the disposition of fines.

The fifth and sixth sections read as follows:

5. Useful occupation and reasonable distance shall be questions of fact to be decided by the magistrate.

6. The magistrate may hear and consider other defenses than those mentioned in section two.

HOUSING AND WELFARE WORK.

FINANCIAL ASPECTS OF WAR HOUSING IN GREAT BRITAIN.

BY LEIFUR MAGNUSSON.

In the December, 1917, issue of the MONTHLY REVIEW there appeared a summary of the principal aspects of war housing in Great Britain. At that time considerable desirable information as to the British war housing program was not available. In July, 1917, rather full memoranda on the subject were prepared by the ministry of munitions and the office of works for the parliamentary committee of public accounts.[1] These reports were not available in this country at the time the article in question in the MONTHLY REVIEW was prepared. It seems worth while therefore to summarize now these and other statements in order to supplement our present information as to war housing in Great Britain. Some of the data following have been communicated to the bureau as confidential in their details and are presented only in a general way.

The expenditures of the British Government for war housing, consisting of both loans and direct investment, up to March 31, 1917, may be roughly placed at $29,000,000. This probably does not include the cost of the Gretna and Queensferry, Scotland, housing schemes of the Ministry of Munitions estimated to cost over $5,000,000. The sums spent are recapitulated in the statement following:[2]

Housing act, 1914:		
Local Government board for Scotland	£151,300	($736,301)
British office of works	821,327	(3,996,988)
Housing and town planning acts, 1890, 1909:[3]		
Local Government board for England	1,686,611	(8,207,892)
Local Government board for Scotland [4]	26,743	(130,145)
Admiralty	36,800	[5] (179,087)
Army	26,092	(126,978)
Ministry of Munitions	3,181,654	(15,483,519)
Total	5,930,527	(28,860,910)

[1] Great Britain. House of Commons committee of public accounts. Report from the committee of public accounts together with the proceedings of the committee, minutes of evidence, and appendices. London, 1917. pp. iv, xiii, xxi, 109, 204–208, 215–222.

[2] Source: Annual reports of the local Government boards for England and Scotland; appropriation accounts of the Army, Navy, Ministry of Munitions, and of the housing act, 1914.

[3] These acts authorize housing loans to municipalities, limited dividend housing companies, and private firms and individuals. The amounts here shown cover the war years only, 1914–15 to 1916–17. These amounts may or may not be strictly war housing expenditures. In fact, the loans made by these departments for housing in the years shown are very much less than the amounts advanced in normal peace times.

[4] Applies only to the fiscal year 1914–15. The board has withheld reporting full details as to its expenditures for war housing.

[5] Cost of housing planned to March 31, 1916.

The ordinary housing expenditures made by Great Britain in normal peace times were greatly curtailed as a result of the war. There was placed by law a restriction on certain capital expenditures, which included those for housing. There has been a great scarcity of building labor, and the staffs of the departments of the Government which were concerned in housing work have been greatly depleted by enlistment and by other requirements of other kinds of war work.

Because of the growing feeling that the Government was not doing enough to stimulate housing activity even in peace time, the special housing act of July, 1914, was enacted, having no direct relation to war needs. It has, however, become one of the principal sources for additional funds for housing. This act made available as loans for housing the sum of £2,000,000 ($9,733,000). Aside from what has been appropriated under that act sums have been devoted to housing, as shown, by the army, the admiralty, and principally by the ministry of munitions. Furthermore, the local Government boards for England and Scotland have continued to lend money under powers granted by the principal housing and town planning acts of 1890 and 1909.

As the Ministry of Munitions has undertaken the largest amount of housing, a few of the details of its work will be outlined.

METHODS OF FINANCING.

The expenditures of the ministry of munitions for housing purposes have taken the form of (1) direct grants to municipalities and employers, (2) loans to contractors for permanent housing schemes, and (3) direct construction costs for permanent or temporary housing in the neighborhood of national establishments.

The practice of giving a subsidy from Government funds, however, to a local authority to aid in carrying out war housing schemes has been abandoned in Great Britain in favor of the direct carrying out of a scheme by the department of the Government interested. The Ministry of Munitions at present undertakes to purchase land and to carry out the housing scheme. An agreement is then entered into with a local authority or a public utility society (limited dividend company), or other corporation or person, to take over the property from the ministry at the expiration of a certain number of years after the War at the value the property then has; that is, the purchaser buys at the market value regardless of the original cost and the State assumes the loss arising from having built at a time when material, labor, and money were dear. The ministry, it is noted, retains the property for a number of years after the War in order that prices may have time to become stabilized and the losses of the Government minimized. The period of the retention of the property, it should be emphasized, is in the discretion of the ministry and is not definitely fixed.

PERMANENT HOUSING BY MINISTRY OF MUNITIONS.

Permanent housing was undertaken wherever the housing requirements of a district were undoubted. Very considerable temporary housing was also necessary. "In the long run, however," the Ministry of Munitions states, "there can be no doubt that the provision of temporary accommodation is wasteful. There was a saving in the immediate capital expenditure involved, but the great bulk of the money spent would bring no return of any kind after the War."

Contributions for permanent housing by municipalities and housing companies have been made to the extent of £24,040 ($116,990.66) on a total estimated cost of £90,359 ($439,732.07), representing a percentage of 26½ per cent. By this means 1,361 houses have been provided.

Contributions of £73,500 ($357,687.75) have been made to seven contracting companies in the form of allowances from excess profits. The cost of the accommodations thus provided has been £289,372 ($1,408,228.84). Of this sum £236,672 ($1,151,764.29) provided 665 cottages.

Making allowances to manufacturers for housing out of excess profits is not, however, considered advisable by the Ministry of Munitions; first, because it is "a radically unsound principle to intercept revenue before it reaches the Exchequer;" second, because it is not desirable on general principles that employers should be the landlords of their employees; and, third, because many employers are disinclined to become builders or owners of houses.

Direct contributions toward housing have been made by three steel manufacturing firms. This was found necessary in the three localities affected, as arrangements with the local authorities fell through. It was arranged that the work should be done at the expense of the ministry and that the employers would make a contribution of £20 ($97.33) per house. Provision was made for 350 cottages at a total cost of £128,961 ($627,588.71), or $1,793.11 per house, exclusive of roads and outside improvements. The work was executed more rapidly than the local authorities would have done it. "Previous experience * * * had shown that local authorities were apt to be very slow." [1]

Loans have been made to contracting companies amounting to £380,500 ($1,851,703.25) which have made possible the erection of 1,250 cottages and 150 dwellings in tenements. Rates of interest were generally 4½ per cent, in one instance 4 per cent and in another 5 per cent. The period of payment is 40 years, except in one instance 30 years.

[1] Memorandum regarding housing carried out by the Ministry of Munitions. (Report of the committee of public accounts. London, 1917, p. 217.)

The housing scheme at Gretna, Scotland, may be instanced as one of the largest undertaken by the Ministry of Munitions. It is estimated to cost £959,000 ($4,666,974) and to house 12,000 workers. It has been carried out on the "cost plus" basis. The development at Queensferry, Scotland, is estimated to cost £100,000 ($486,650). Here the work has been done on contract basis, payment being made of actual cost plus a lump sum profit, the profit being reduced if the estimated cost is exceeded up to a deduction of a maximum of half the profit as a penalty.

TEMPORARY HOUSING BY MINISTRY OF MUNITIONS.

Temporary housing by the Ministry of Munitions has been provided (April, 1917) for a maximum of 19,565 workers at an estimated cost of £1,088,167 ($5,295,564.71). The number in occupation at the end of April, 1917, was 11,005, or 56 per cent of the possible number. Temporary housing has taken the form of cottages, hutments—barrack-like rows—houses of various types, and hostels, or temporary boarding and lodging houses.

In many instances the erection of hostels and hutments has been in excess of the requirements.[1] In the case of the cottages occupation is said to have been fairly complete.[2] Even the hostels and hutments administered by the explosives department of the ministry have been fully occupied. These latter, it may be explained, have been erected in isolated districts where no other houses have been available, as, for instance, in the town of Gretna near the southern border of Scotland. Some instances of partial occupancy show that at Abbey Wood (Edgewood) a hostel for 485 persons was occupied on January 21, 1918, by only 152, or 31 per cent of the possible occupancy; and at Birmingham, one for 480 persons was occupied by 149 persons, also an occupancy of 31 per cent.

Some of the hostels at Sheffield have been removed but the expense involved was in some cases equal to their original cost. Further expense, too, was necessary to make hutments removed habitable again. Certain huts were transferred to the admiralty.

MAINTENANCE EXPENSES.

As the accommodations provided have not been fully occupied, the income in rents has not been sufficient to meet capital charges, interest, and maintenance. Taking the schemes as a whole a rough calculation by the auditor general indicates that to October 31, 1917, expenditures, apart from capital, exceeded receipts by £8,000

[1] Memorandum regarding housing carried out by the Ministry of Munitions. (Report of the committee of public accounts. London, 1917.)

($38,932). Only in the case of the cottages did receipts exceed expenditures.[1]

WOOLWICH HOUSING SCHEME BY OFFICE OF WORKS.

The war housing program in Great Britain has not been centralized in one department or authority. The largest builders have been the Ministry of Munitions and the Office of Works. To the latter was committed the permanent part of the housing scheme at Well Hall for the Woolwich Arsenal.

The finances of this development are now almost completely known.[2] The net cost of that part of the scheme carried out by the Office of Works, which supplies 1,298 dwellings (212 flats and 1,086 cottages), is fixed at about £808,000 ($3,932,132). The average cost per house is therefore about £662 ($3,221.62), including cost of land, roads, sewers, and fences. The cost of land formed about 5 per cent of the total net cost.

The Ministry of Munitions also has constructed at Well Hall 2,656 flat dwellings and 77 hostels at a total cost of £980,803 ($4,773,078). The development has a maximum accommodation for 8,326 workers.

As speed was of the essence of the work, regardless of cost, it was foreseen and accepted as proper that at least 30 per cent must be written off the capital cost before the scheme could be considered a profitable economic venture. After the War it will be handed over to a public utility society which limits dividends and which, by only renting and not selling houses, retains any future speculative or unearned gains for the benefit of the community. Town planning principles have been observed and 12 houses limited to an acre. The work was done on a cost plus basis, with the following requirements observed: (1) The contractors to work with the utmost expedition; (2) contracts determinable at any time; (3) all purchase of materials only with the consent of the department architect and with written approval of the prices to be paid; (4) presentation of actual vouchers for all payments; (5) wages to be payable under the fair wages resolution of the House of Commons and all wage lists subject to inspection and certification by the department architect as proper under the contract; and (6) the department to have the benefit of all trade discounts above 5 per cent.

The main element producing excessive costs was labor, due to the large amount of overtime required to insure speed. Labor cost formed 60 per cent of construction costs, whereas normally it should be 40 per cent. Land was obtained at a low price, the owner parting with it at 50 per cent below the Government valuation.

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[1] Ministry of Munitions. Appropriation account, 1916–17. London, 1918, p. 24. (Parliament, House of Commons. Paper No. 24.)

[2] Minute as to housing scheme carried out by H. M. Office of Works on the Well Hall Estate, Woolwich. (Report of the Committee of Public Accounts. London, 1917, pp. 205–207; cf. idem, p. 222.)

One thousand houses were ready for occupancy in eight months, and all of them in 10 months after the work was started (February, 1915).

THE BRITISH HOSTELS FOR MUNITIONS WORKERS.

Boarding and lodging houses were provided near munition plants in Great Britain about two years after the War began in order to take care of the increasing army of munition workers. These houses, termed hostels, are generally of a temporary nature and for the most part are provided for women workers. They are under the inspection of the hostel subsection of the welfare and health section of the Ministry of Munitions, whose first and second reports,[1] issued in mimeograph form, have recently come into the possession of this bureau through the courtesy of Mr. Frederick L. Ackerman, of New York City.

According to the reports, these hostels have not been commercially profitable. By far the largest proportion of them have not even paid expenses; only 1 out of 324 reported has paid a commercial profit. They are therefore in the nature of subsidies to wages.

The actual charges for accommodations in them absorb, on the average, 38 per cent of the wages in the case of men and 43 per cent in the case of women occupants. The average weekly wages of men workers are $11.76, ranging from $9.73 in York and East Midland to $14.23 in South East London; the average weekly wages of women are $8.29, ranging from $6.20 in Scotland to $10.10 in South West London establishments.

AVERAGE WEEKLY WAGES AND PER CENT OF AVERAGE WEEKLY WAGES CHARGED FOR ACCOMMODATIONS IN HOSTELS AND IN PRIVATE HOUSES IN EACH DISTRICT.

District.	Males.				Females.			
	Number of hostels.	Average weekly wages.	Per cent of weekly wages charged by— Hostels (per cent of wages).	Per cent of weekly wages charged by— Private homes (per cent of wages).	Number of hostels.	Average weekly wages.	Per cent of weekly wages charged by— Hostels (per cent of wages).	Per cent of weekly wages charged by— Private homes (per cent of wages).
Scotland	6	$13.55	35.8	40.7	23	$6.20	41.6	58.5
Manchester and N. W.	8	12.65	33.8	43.5	11	6.96	51.6	55.9
York and Midland (East)	2	9.73	48.7	46.2	13	7.73	39.8	38.3
Birmingham and Midland	3	10.16	43.1	64.7	19	8.07	42.5	45.5
Bristol and S. W.	1	10.34	40.0	42.4	10	8.01	44.6	43.6
London and S. E.					4	8.60	43.1	54.9
London and S. W.					6	10.10	44.6	45.1
London and S. E.	11	14.23	33.3	43.6	25	11.13	38.7	39.4
Average, all districts	31	11.76	38.4	46.2	111	8.29	43.1	47.4

[1] First report on hostels, May, 1917; second report on hostels, January, 1918. (Mimeographed sheets.)

The hostel subsection had under its inspection in May, 1917, 494 hostels—216 for men, 276 for women, and 2 for boys. In January, 1918, there were 524 hostels. The housing capacity of the 494 hostels reported in 1917 was 34,285, but at present they are only filled to 55 per cent of this capacity, the men's to 60 per cent and the women's to 50 per cent. It is not to be assumed that the men's hostels are therefore the more popular; the fact is that the men's hostels are built only where the demand is overwhelming, while the women's are built in excess of the demand so that dilution of labor and other schemes for the employment of women may be given full scope by bringing women into the districts where they are required, with the minimum of inconvenience.

Of the 494 hostels erected and under Government supervision at the time of the first report in May, 1917, 258 are private. No great proportion of these hostels existed before the War—at least no Government hostels, and of the private ones roughly 9 out of every 100. Private hostels before the War consisted of boarding houses for educated working women, boarding houses for workingmen, those managed by firms, and institutional ones. "The net results of the War as regards women's hostels has been to develop a new type of working-girl hostel. The old-fashioned hostels are slowly adapting themselves to the new conditions." For the men also the new type of hostel has been of a much higher standard of comfort than that of the pre-war hostel.

Many of the privately owned hostels accommodated only from 20 to 200 working girls, and because of their smallness are more popular than the larger ones where personal intercourse between the management and the tenant is not easy. Some of the larger hostels, however, are securing this advantage by dividing the building into smaller sections, and particularly by having smaller dining rooms. It is thus possible to construct large hostels, saving thereby overhead expense and capital construction charges, and at the same time sectionalizing, as it were, the dining-room facilities, and securing the advantages of a smaller grouping of the girls which results in greater social intercourse.

Several hostels are doing only so-called clearing-house work; that is, taking in girls only for one or two nights when they first come into a town, and keeping them only until they find permanent lodging and rooms. This is said to be perhaps the most important work hostels can do.

COST AND MAINTENANCE.

The cost of building these hostels, which are of wood or concrete blocks, amounts to about 7d. (14 cents) per cubic foot for structure, or from £40 ($194.66) per person for a small hostel to £20 ($97.33) per person for a large hostel. This figure covers the necessary dining and recreation rooms, but not outside improvements. The cost of furnishing and equipment ranges from £17 10s. ($85.16) to £20 ($97.33) per person. The cost for board is estimated at 10s. 6d. ($2.56) per week per person in the case of women in large hostels and 14s. ($3.41) in small hostels. For men the corresponding net cost is 12s. ($2.92) in large hostels and 15s. ($3.65) in small ones. Overhead charges come to about 5s. ($1.22) per person per week. The total cost to the management of a hostel is therefore from 16s. 6d. ($4.01) to 19s. ($4.62) per person per week for women and from 17s. ($4.14) to 20s. ($4.87) for men.

The treasury on July, 1917, set aside £5,000 ($24,333) for financial aid to small hostels. In the case of so-called clearing hostels, less able to pay their way and very essential for the importation of labor, grants for maintenance are made not exceeding 6d. (12 cents) per person per day.

PLANNING AND MANAGEMENT.

The one-story type of building has been adopted, constructed of wood, cement coke breeze blocks, or concrete slabs. The maximum capacity recommended is 500 persons. The administrative rooms, it is recommended, should be centrally grouped, and several dining rooms of moderate capacity rather than one large room is preferable for reasons of sociability already stated.

The proportion of staff to tenants in the hostels is found to be 1 to 10 in houses accommodating 100 persons and over; 1 to 8 in those housing 50 to 100; and 1 to 6 in those housing under 50 tenants.

RECREATION FACILITIES.

Considerable attention is given in the hostels to the provision of recreation. Educational classes are said to be becoming more popular than at first, although the time is somewhat curtailed for that purpose as the shifts are long and the work too arduous to leave much energy for study after hours. The purpose of such lectures as are given has been to increase breadth of view and "to provide distraction from the pressing claims of long and monotonous work."

Libraries of modern books are in great demand. Games are easily provided in large hostels, although organized games are not always popular "chiefly because the girls have not played them at school." Hockey, football, and the like have a better chance of success where young girls are housed. Much can be done also by advising the girls to join their factory clubs, local clubs, and others.

Gardening on the waste ground between the wings of the hostel and on ground surrounding the hostels has been successfully encouraged. Garden tools and seeds are donated from a welfare fund given to the Ministry of Munitions.

POPULARITY OF HOSTELS.

The popularity of the hostels has probably increased; they are at present (January, 1918) about two-thirds occupied as compared with about one-half in May, 1917. Two Government hostels now have a "waiting list." The standard of comfort in hostels is said to be steadily increasing. However, it should be noted that the shortage of accommodations is more acute now than formerly, and that private homes, on account of the increase in prices, are refusing to board their lodgers, all of which has tended to fill up the hostels.

OPINIONS REGARDING HOSTELS.

Employers.—Many employers consider hostels virtually a subsidy to wages and prefer the arrangement to raising wages. Necessity, very largely, and also a desire for the comfort and welfare of the employees, has induced employers to erect hostels. The hostel subsection of the Ministry of Munitions notes two points bearing on the matter of company hostels, namely, that living in them is entirely voluntary and that the employees of a company living in them are not paid less than those who are not. In many cases, however, while living in them is voluntary in theory, in practice it is not, owing to the fact that the factories are so isolated that other lodgings can not be had; this is the case in 6 out of 23 company hostels.

Employees.—Hostels in Scotland and the North of England are not generally popular among the employees. In Scotland they are associated with the idea of reformatories. In England, on the other hand, the workers appear to like hostel life.

Religious and charitable societies.—For these societies the war-time hostel has meant an opportunity of extending their social work among girls.

Trade-unions.—The trade-unions are generally opposed to the hostels. The extreme view held by the union leaders is expressed briefly by the secretary of the Coventry branch of the National Federation of Women Workers, who is "opposed to the whole idea

of feeding and housing girls under the nose of the employer." Some agitators declare that a hostel run by a private firm resembles a compound for black labor.

The strongest objection is raised against company-controlled hostels. It is felt to be a bad thing that workers should be segregated according to employment, that they should be not only working but eating and sleeping in company with their work mates.

Attention is called to another sinister aspect of the system of company hostels, namely, that the moment a worker loses her job, simultaneously she loses her board and lodging. If she is at the same time a long distance from home, she is left in a position of great helplessness and subject to serious temptations. The choice of the woman worker lies between the possible relatively better accommodations in company hostels and the disadvantage of a system which bars a woman from any choice in her surroundings or her companions. "She is under the firm's forewoman by day and the firm's matron by night, and all the time under the firm's welfare supervision."

The trade-unionists consider as least objectionable hostels run on commercial lines and locally controlled. Government hostels approaching that ideal are approved. Cooperative housekeeping for working girls along lines worked out by Miss Jane Addams, of Hull House, Chicago, is also approved as "a very much finer type of a cooperative household" than the company hostel. Such an organization, or a similar one, would appeal to the "thousands of homeless women who are not only reliable but whose genius for homemaking is thwarted by circumstances beyond their control."

Ministry of Munitions.—"The welfare and health section [of the ministry] regards munition hostels as a temporary war expedient and as a means of keeping up efficiency and output, because they provide proper housing and feeding of the workers. Hostels are in no sense regarded as a permanent solution of the housing problem."

On the other hand, while not a solution of the housing problem, the Ministry of Munitions feels that the hostels will have the effect of raising the standard of living of the working people because the comfort and the character of the food provided in them has been above the existing standards.

INDUSTRIAL CANTEENS IN FRANCE.[1]

In industrial centers where the working population, already important in time of peace, is greatly increased as a result of the organization of establishments manufacturing war supplies, the question of recruiting workers is closely connected with that of food and lodging. The difficulty is not only to find a plentiful supply of labor but also to house the workers comfortably and feed them for a reasonable amount, since the local boarding house and restaurant keepers do not hesitate to raise their prices.

In France the under secretary of munitions at first directed the managers of State establishments and controllers of manual labor to organize "ordinaires"—restaurants serving table d'hote meals—or other lunch rooms regulated either by the State or by the manufacturers, alone or combined, the management of which was to be intrusted to cooperative societies. In July, 1917, the ministry was forced because of the high prices and the difficulty of getting supplies to create a food bureau for war factories.

This office centralizes all the questions concerning the operation of the canteens, cooperative societies, workers' restaurants, etc., engaged in feeding the war workers. It establishes between them useful relations for the purchase of provisions, groups these organizations by sections, by reason of these purchases, under the authority of a district chief, aids the district groups in their buying, and obtains the means of transportation of supplies.

In the meantime, for the purpose of securing for the organizations the necessary financial aid, the under secretary of state appealed to the representatives of employers and to the National Federation of Cooperative Societies. In October, 1916, under the name of "Cooperative Funds of War Factories" an association was established having for its object the receiving of subscriptions, gifts, and grants to be used in the establishment of workers' restaurants. Up to last October more than 220,000 francs ($42,460) had been distributed for this purpose.

A law of the 30th of last June also granted to the Ministry of Munitions power to advance sums to the organizations formed to feed and lodge war workers. Under the terms of a decree of August, 1917, these advances are made upon the advice of the permanent section of the commission consulting with labor in the establishments depending on the ministry of munitions. A later decree defined the conditions under which the advances can be made and fixed the rate of interest on the loans at 2 per cent.

[1] Summarized from Les Restaurants de Guerre in Bulletin du Ministère du Travail et de la Prévoyance Sociale, January–February, 1918, pp. 22–23.

STATE ESTABLISHMENTS.

Two circulars, one under the date of October, 1915, and the other October, 1916, outline the conditions under which State establishments may intervene in order to assure the proper feeding of their employees.

The first circular recommends, when local facilities fail to meet the needs, the establishment of restaurants for both military and civil workers which serve a regular meal and which are managed, if possible, by commissions representing those interested. According to information gathered in July, 1917, there were 21 such restaurants feeding 26,395 workers, 13 of these being managed by commissions in which the consumers are represented. This does not include the restaurants specially organized for the benefit of colonial and Chinese laborers. These restaurants, by reason of their moderate prices, have rendered a distinct service to both military and civil employees in State establishments, but have failed of complete success because of the fixed meal which does not allow the consumer to choose his menu according to his taste and appetite.

On the other hand, cooperative restaurants organized under the conditions of the circular of October, 1916, have been entirely successful. This circular provided for the building of completely equipped restaurants adjoining the workers' cantonments and managed by a cooperative society formed among the personnel of the establishment, or, failing a society of this nature, a cooperative society composed of all the workers of the locality. The concessions for the restaurants are made for the duration of the War. All workers, whether cooperative society members or not, are allowed to use the restaurants. The cooperative society accepts the fixing of the price of meals by the management and provides facilities for warming the lunches for those employees who bring their own. Any workers brought from another locality who have been promised board and lodging under certain conditions receive a special rate from the restaurant. The sale and consumption of alcoholic beverages are strictly forbidden

The administration and management of the cooperative restaurants must remain entirely separate from the management of the factory, and an establishment can not have upon its pay roll an employee who gives his whole time to the work of a cooperative society.

There are 11 cooperative restaurants in State establishments patronized by nearly 8,000 workers. Fifteen other restaurants are planned, 9 of which are nearly completed.

PRIVATE MANUFACTORIES.

The manufacturers' associations which were organized in October, 1916, for the purpose of collecting money to aid those cooperative societies which desire to organize cooperative restaurants for mu-

nitions workers made a contract with the societies by which the latter kept their independence, since it is necessary, if the enterprise is to last, that the workers should have the feeling that this work belongs to them and is managed by their representatives. In the region about Paris these patronal associations, which number 10, are associated with the cooperative societies of Paris and its environs for the maintenance of 28 restaurants having 10,140 places and serving double this number of consumers. In other sections of the country about 6,100 workers are provided for and other buildings are under construction.

These restaurants are reserved, primarily for workers employed by the associated manufacturers, and special cards of admission are issued by the employers. The public, however, may be admitted whenever there are vacant places, which are more frequent usually at the evening meal. Wherever the necessity has been felt, arrangements have been made to furnish hot meals to night workers.

In addition to these restaurants there are in this section about Paris 8 cooperative restaurants organized by individual employers which are reserved for their own employees. Outside of Paris the cooperative movement has been less developed. In private factories there are 30 restaurants, 24 of which are managed by the societies, which are open to all the consumers, and 6 by societies limited to the working force of these establishments. The weakness of local cooperative societies explains the creation in many provincial factories of purely patronal restaurants The Ministry of Munitions, however, urges all employers, no matter how disinterested their motives, to avoid paternalism and to leave the management as much as possible to the employees.

According to an investigation conducted in July and August, 1917, there was a total of 242 canteens and "ordinaires" conducted by both State and private munition factories, which served approximately 190,000 persons daily. Sixty of these, with about 91,000 customers, were in State-controlled establishments. There were 9 restaurants which were managed cooperatively by municipalities and munitions establishments; 50 conducted by open cooperative societies; 21 by cooperative societies limiting their membership to employees of the factories; 29 conducted by the factory management with the aid of employee representatives; and 133, with a total of about 122,000 consumers, which were controlled by the employers alone. The latter number, however, includes those restaurants feeding other European, colonial, and Chinese laborers, many of whom are lodged and fed in fulfillment of their labor contracts. There were also 102 food stores reported which were maintained by the cooperative societies, many of which cater to those workers who carry their meals home. No

cooperative societies have been included which, while serving the generality of consumers have not been established especially for the employees of the war factories.

In restaurants connected with 182 private factories nearly 100,000 men and women are fed either once or twice daily. It is of interest to note that this figure is nearly identical with the number reported in November, 1917, as being served in 250 English industrial canteens. The important part played in France by the cooperative societies is shown by the fact that there are 71 restaurants reported which are managed by these societies which feed more than 30,000 workers.

INDUSTRIAL SAFETY AND HYGIENE.

CODE OF LIGHTING FOR FACTORIES AND OTHER WORK PLACES.[1]

There has recently been issued by the committee on labor, advisory commission, Council of National Defense, three pamphlets, composing a welfare work series. No. 1 is entitled Industrial fatigue; No. 2 Manufacture and loading of high explosives; and No. 3 gives a code of lighting for factories, mills, and other work places, prepared by the divisional committee on lighting, section on sanitation, committee on welfare work.[2] The first two of these three pamphlets are reviewed briefly on later pages of the REVIEW.

The lighting code has been drawn in the belief that under proper illuminating conditions the health, contentedness, safety, and skill of employees are maintained at high standard, that the output is increased in quantity and improved in quality, and that it results in a proportional reduction in the cost of each unit of finished product when it reaches the public.

It is of extreme importance in factories and workshops to avoid glare, which is not only fatiguing to the eye but also conducive to the incorrect estimation of sizes and locations of objects in the field of view. In factory lighting, declares the report, each lamp should be so located that the eye does not see it in the ordinary course of work, and so shaded or covered that brilliant reflections are avoided. The desired result can be obtained by putting over the lamp an open shade which screens it and reflects downward much of the light which would otherwise be either of no value or actually detrimental. Another way of accomplishing the same result is to surround the lamp with a diffusing globe dense enough not to reveal the form of the actual light source within, but to give the effect of the light pouring from the globe as a whole.

An appendix to the report contains specific suggestions for various locations of lights. The general requirements of good artificial lighting are listed as follows:

1. Sufficient illumination should be provided for each workman irrespective of his position on the working space.

2. The lamps should be properly selected and so installed as to avoid or minimize strain on the eyes of the workmen. The type and size of lamp should be adapted to the particular ceiling height and class of work in question.

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[1] Cf. article on the same subject in the MONTHLY REVIEW for July, 1916, pp. 101–107.

[2] United States Council of National Defense: Advisory Commission, Committee on Labor. Code of lighting for factories, mills, and other work places. Washington, January, 1918. 26 pp.

3. The lamps should be operated from sources of supply which will insure continuity of service and steadiness of light.

4. Adequate illumination should be provided from overhead lamps so that sharp shadows may be prevented as much as possible, and in such measure that individual lamps close to the work may be unnecessary except in special cases.

5. In addition to the illumination provided by overhead lamps, individual lamps should be placed close to the work if they are absolutely necessary, and in such cases the lamps should be provided with suitable opaque reflectors.

The advantages which are declared to accrue as a result of good lighting include—

1, reduction of accidents; 2, greater accuracy; 3, decreased spoilage; 4, increased production for the same labor cost; 5, less eyestrain; 6, better working and living conditions; 7, greater contentment of the workmen; 8, better order, cleanliness, and neatness in the plant; 9, easier supervision of the men.

The following is the code recommended by the divisional committee on lighting:

Rule 1. General requirements: Working or traversed spaces in buildings or grounds shall be supplied during the time of use with artificial light in accordance with the following rules, when natural light is less than the intensities in rule 2.

Rule 2. Intensity required: The desirable illumination to be provided and the minimum to be maintained are given in the following table:

Item.	Foot candles[1] at the work.		
	Ordinary practice.		Minimum.
(*a*) Roadways and yard thoroughfares	0.05 to	0.25	0.02
(*b*) Storage spaces	.50	1.00	.25
(*c*) Stairways, passageways, aisles	.75	2.00	.25
(*d*) Rough manufacturing such as rough machining, rough assembling, rough bench work	2.00	4.00	1.25
(*e*) Rough manufacturing involving closer discrimination of detail	3.00	6.00	2.00
(*f*) Fine manufacturing such as fine lathe work, pattern and toolmaking, light colored textiles	4.00	8.00	3.00
(*g*) Special cases of fine work, such as watchmaking, engraving, drafting, dark colored textiles	10.00	15.00	5.00
(*h*) Office work such as accounting, typewriting, etc	4.00	8.00	3.00

[1] The foot candle, the common unit of illumination, is the lighting effect produced upon an object by a standard candle at a distance of 1 foot; at 2 feet the effect would be not one-half foot candle, but one-fourth foot candle, etc. A lamp which would give off 16 candlepower uniformly in all directions would produce a uniform illumination of 1 foot candle at a distance of 4 feet in any direction. Measurements of illumination are to be made at the work with a properly standardized portable photometer.

Rule 3. Shading of lamps: Lamps shall be suitably shaded to minimize glare. (NOTE.—Glare, either from lamps or from unduly bright reflecting surfaces, produces eyestrain and increases accident hazard.)

Rule 4. Distribution of light on work: Lamps shall be so installed in regard to height, spacing, reflectors or other accessories, as to secure a good distribution of light on the work, avoiding objectionable shadows and sharp contrasts of intensity.

Rule 5. Emergency lighting: Emergency lamps shall be provided in all work-space aisles, stairways, passageways, and exits to provide for reliable operation when, through accident or other cause, the regular lighting is extinguished. Such lamps shall be in operation concurrently with the regular lighting and independent thereof.

Rule 6. Switching and controlling apparatus: Switching or controlling apparatus shall be so placed that at least pilot or night lights may be turned on at the main points of entrance.

INDUSTRIAL FATIGUE.

"Industrial fatigue" is the title of a pamphlet of 13 pages issued by the committee on labor, advisory commission, Council of National Defense.[1] It describes the ways of detecting fatigue and the ways of reducing fatigue. "It is often possible," declares the report, "to increase output temporarily by increasing the work of the employee, but, if he is overworked, his output falls off; hence such a method, if carried far, quickly defeats itself and in the long run is not profitable. Given adequate equipment, adequate administration of the plant, and a proper spirit among the employees, fatigue is the greatest single obstacle to a maximum output. Fatigue diminishes output not only directly, but indirectly, by increasing accidents and the proportion of spoiled work and by causing sickness and absences of employees. It will, therefore, be profitable to employers, to employees, and to the Nation itself, to inquire into the ways by which fatigue may be reduced."

The detection of fatigue may be accomplished, suggests the report, by observations of the amount of output, the amount of power used, the amount of spoiled work turned out, and by certain laboratory tests of the muscles, the nervous system, sight, hearing, and chemical changes within the body. Ways of reducing fatigue include the introduction of recess periods, adjustment of the speed of operation to suit the average worker, the application of incentive systems, omission of unnecessary motions, provision of adjustable seats, proper and adequate ventilation and sanitary provisions, alternation of day and night work, adjustment of hours of work to suit the particular occupation and the individual worker, regular holiday periods, avoidance of overtime, omission of Sunday work, and attention to the sanitary conditions outside the factory.

The pamphlet notes, in conclusion, that the division on industrial fatigue, composed of scientists organized under the committee on labor of the Council of National Defense and working in cooperation with the Public Health Service is now engaged in examining munition factories and other industrial establishments that are manufacturing war supplies with the aim to bring together the combined resources of scientific investigation and the practical experience of industries in this and other countries to show how avoidable fatigue may be eliminated, and how in the present exigency the greatest output of the necessities of war may be secured compatible with the maintenance of the working power of the workers.

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[1] United States Council of National Defense: Advisory Commission, Committee on Labor. Industrial Fatigue. Welfare work series, No. 1. Washington, January, 1918. 13 pp.

MANUFACTURE AND LOADING OF HIGH EXPLOSIVES.

Under the direction of the advisory commission, Council of National Defense, the divisional committee on industrial diseases, poisons, and explosives of the section on sanitation, committee on welfare, has issued a report (Welfare series No. 2) on the manufacture and loading of high explosives.[1] This report is the result of conferences with employers or their representatives which were held in order that codes or improvements might be recommended that would not bring undue hardship at a time when employers engaged on Government contracts could not give consideration to drastic changes without curtailing the output of war products. The rules and regulations outlined in this pamphlet, applicable to all factories where nitration is carried on or in which poisonous nitro and amido compounds are manufactured or handled, were carefully considered by representatives of the industries concerned, of the United States Department of Labor, and of labor organizations, and at a meeting held in New York City on December 1, 1917, were adopted by the industries represented as standard practice for their establishments.

The code makes provision for adequate ventilation, the prevention of dust, sanitary and ample drinking and washing facilities, locker rooms, clothing, respirators, foot protection, toilet facilities, medical supervision, physical examination of workers, and restrictions on the employment of certain persons, hours of labor, and special requirements to be observed in the manufacture of fulminate of mercury in cotton nitration plants, in the manufacture of picric acid and of poisonous nitro and amido aromatic compounds, and for loading ammunition.

An important matter in this connection is the physical examination of workers, which is required in the case of those employed as process men in manufacturing or handling poisonous nitro or amido compounds, before the expiration of 24 hours after employment, and at least every 30 days thereafter, and also before resumption of work after an absence due to sickness or to accident. Four classes of persons are considered unfitted for employment in any establishment handling, manufacturing, or otherwise using any nitro or amido compounds:

(*a*) Persons under 18 years of age.

(*b*) Persons suffering from any form of inflammation of the bladder.

(*c*) Persons whom the factory manager or superintendent knows to be addicted to the excessive use of alcohol in any form, or who are under the influence of intoxicants or narcotics.

(*d*) Persons suffering from any form of anemia.

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[1] United States Council of National Defense: Advisory Commission, Committee on Labor. Manufacture and loading of high explosives. Washington, January, 1918. 19 pp.

Under the regulations proposed the employer is required to pay 50 per cent of the cost of suitable clothing, including overalls or other working clothes, gloves of rubber, leather, or canvas, and shoes with nonabsorbent soles. Hours of labor recommended should not exceed the customary hours in the establishment or the standard already attained in the industry and in the community, and in no case should exceed 10 per day for an adult workman.

INDUSTRIAL ACCIDENTS IN WISCONSIN DURING THE WAR.

The accident experience of Wisconsin during the period of the War is interestingly shown in the following table, which gives the number of industrial accidents reported to the industrial commission of that State, under the workmen's compensation act, by months, from September, 1911, to April, 1918. The table is reproduced from a typewritten copy furnished the bureau by the industrial commission.

INDUSTRIAL ACCIDENTS UNDER THE WORKMEN'S COMPENSATION ACT, WISCONSIN, 1911 TO 1918.

Month.	1911	1912	1913	1914	1915	1916	1917	1918
January	.....	171	368	878	940	1,338	1,897	1,591
February	.....	160	347	1,023	799	1,372	1,935	1,651
March	.....	194	365	1,145	1,128	1,708	1,972	1,959
April	.....	193	351	999	1,015	1,443	1,554	1,881
May	.....	247	426	1,021	894	1,554	1,690	.....
June	.....	242	422	927	952	1,510	1,678	.....
July	.....	232	478	842	1,094	1,407	1,493	.....
August	.....	258	557	942	1,050	1,717	1,595	.....
September	93	226	529	772	1,071	1,523	1,456	.....
October	104	233	791	831	1,186	1,760	1,427	.....
November	128	217	849	871	1,328	1,788	1,368	.....
December	119	280	860	1,029	1,333	1,681	1,614	.....
Total	441	2,574	6,346	11,290	12,781	18,769	19,697	.....

DRAFT OF UNIFORM OCCUPATIONAL DISEASES ACT.

The Board of Commissioners for the Promotion of Uniformity of Legislation in the United States embodies as the feature of its ninth annual report [1] a report of its special committee on occupational diseases. This report consists for the most part of a draft of an act relating to compensation for industrial diseases intended as a supplement to their draft of a uniform workmen's compensation act. This draft is a revised form of the bill reported by the committee at the previous annual session, the revision being based on continued consideration of the subject and a number of suggestions and criticisms received during the year.

The committee is of the opinion that none of the workmen's compensation acts, which are held to include occupational diseases, pro-

[1] Ninth Annual Report of the Board of Commissioners for the Promotion of Uniformity of Legislation in the United States: Public Document No. 86. Boston, December 31, 1917. 21 pp.

vides any proper machinery for awarding compensation due on account of disease. No list is submitted of the acts in mind, but since the Massachusetts law is the only one which has hitherto been construed to include diseases unless specifically embraced by the act, the list is quite brief, including only the Massachusetts law by construction and those of California and Hawaii by express terms of the law.

No definition has been hit upon that satisfactorily classifies occupational diseases, and the committee recommends as the only practical way of dealing with the matter the enumeration of such diseases as are found to result from certain employments or processes. It says:

> The words "occupational diseases" have two different meanings. They are used to describe—
>
> First. The large number of diseases to which the public at large is subject but which may be caused or aggravated or accelerated by specific conditions of labor. This is the commonly accepted medical definition.
>
> Second. Those relatively few diseases to which the public at large, generally speaking, is not subject but which are attendant upon and peculiar to specific industrial processes and for which the industry itself is wholly or principally responsible. This may be called the industrial definition.

Only the latter class of diseases is thought to be justly compensable under the conception of compensation legislation held by the committee. The obvious defect of determination by schedule, such as contemplated here, is that a perfectly meritorious claim on account of occupational disease might be established, but if there has not been a sufficient prior number of similar cases to secure the listing of that particular disease, no benefits could be recovered under the act; while if a definition based on principle could be formulated, the occasional case would receive its just treatment.

Some emphasis is laid upon the British usage of the term "industrial diseases," as distinguishing them from a larger class of occupational diseases, but the committee has chosen to retain the more commonly used term "occupational diseases," though using it in the more restricted sense of the two meanings defined above. It is not evident, however, that the British authorities have made an attempt to discriminate in any such manner as is implied by the foregoing remark, since the law relates simply to workmen "suffering from a disease mentioned in the third schedule," where "the disease is due to the nature of any employment in which the workman was employed." No further definition of the nature of the disease is given than is involved in the phrase "due to the nature" of the employment. However, the secretary of state is authorized to extend the provisions of the act to other diseases, and in his order of May 22, 1907, such provisions are extended "to certain industrial diseases,"

the phrase here used being apparently the basis of the distinction discovered by the committee.

The committee desires to exclude "ordinary diseases or sicknesses which workmen suffer like other members of the community, such as rheumatism, tonsilitis, or tuberculosis," saying that there is already a movement well started looking toward the care of this "larger class of occupational diseases" by what is called health insurance.

The draft submitted follows closely the provisions of section 8 of the British workmen's compensation law of 1906, and offers as its list of occupational diseases to be compensated that of the British law as supplemented by orders of the secretary of state, without addition or diminution, though with some slight qualifying changes. The administration of the proposed act is to be in the hands of the industrial accident board assumed to be in existence under the provisions of the previously proposed uniform workmen's compensation act. The disablement is to be treated as an accident, but certain specific modes of handling the cases are provided through official certifying physicians, who are to be in continuing service, together with medical referees, who are to be appointed for particular cases. The provisions of the uniform compensation act are to apply so far as possible, and nothing contained in this supplemental act is to affect the rights of workmen to recover compensation for diseases which may come within the scope of the principal act by reason of their being considered as personal injuries by accident.

Suggestions as to changes or additions needed to perfect the act are invited.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, APRIL 15 TO MAY 14, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between April 15, 1918, and May 14, 1918, in 143 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, APR. 15 TO MAY 14, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, cement finishers, Des Moines, Iowa	35	500	Pending.
Threatened strike, machinists, Bethlehem Steel Co., Allentown, Pa.			Adjusted.
Strike, boatmen, Chesapeake & Ohio Canal	250		Do.
Strike, firemen, Manganese Manufacturing Co., Dunbar, Pa.	12	750	Pending.
Strike, James Shewan & Sons Co. (Inc.), Brooklyn, N. Y.	60	6,000	Adjusted.
Controversy, Grand Trunk R. R. Co. and station men, Boston, Mass.			Pending.
Controversy, Burgess Aeroplane Co., Marblehead, Mass.	75	1,000	Do.
Controversy, St. Louis Car Co. and carpenters, etc., St. Louis, Mo.	1,050		Do.
Threatened strike, Nevada Consolidated Copper Co., Ruth and McGill, Nev.	150	2,800	Adjusted.
Controversy, bituminous miners, Carnegie Mill Mine, Bellaire, Ohio.	70	2,500	Pending.
Strike, teamsters and chauffeurs, Denver, Colo.	375	400	Do.
Strike, molders, Love Bros. Co., Fox River Iron Co., and Aurora Foundry Co., Aurora, Ill.	320	100	Adjusted.
Strike, machinists and helpers, American District Steam Co., North Tonawanda, N. Y.	150	500	Do.
Controversy, McKeesport Tin Plate Co. and mill-house employees, McKeesport, Pa.	1	3,000	Do.
Controversy, F. E. Newberry Electric Co. and electrical workers, March Aviation Field, Alessandro, Cal.	40		Do.
Strike, longshoremen employed on piers of Old Dominion Steamship Co., Richmond, Va.	60		Pending.
Lockout, Rice Lake Lumber Co., Rice Lake, Wis.	250	750	Adjusted.
Strike, teamsters, Rock Island, Ill., and Davenport, Iowa	125		Do.
Controvery, Hudson Coal Co. and molders and core makers, Scranton, Pa.			Pending.
Threatened strike, Quaker City Cab Co., Philadelphia	25		Adjusted prior to commissioners' arrival.
Strike, coppersmiths, Joseph Oats Co., Philadelphia			Pending.
Strike, inside wiremen, Butte, Mont.	37	3,000	Do.
Controversy, Commonwealth Edison Co. and electrical workers, Chicago.	100		Do.
Strike, Jelke Butterine Co., Chicago	600	50	Adjusted.
Strike, Big Savage Fire Brick Co., Frostburg, Md.	45	85	Do.
Controversy, Master Builders' Association and hod carriers and laborers, Des Moines, Iowa.	1,000	3,000	Do.
Controversy, Des Moines City Light Co. and linemen, Des Moines, Iowa.	150	500	Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, APR. 15 TO MAY 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, painters and decorators and Master Painters' Association, Des Moines, Iowa.	350	.....	Adjusted.
Controversy, Chas. Weitz & Sons and painters and decorators, Des Moines, Iowa.	41	.....	Do.
Strike, electrical workers, Des Moines, Iowa	20	300	Do.
Threatened strike, machinists, Valley Forging Co., Verona, Pa.	40	100	Do.
Lockout, textile workers, 10 cotton mills, Columbus, Ga.	800	7,700	Pending.
Strike, molders and pattern makers, Bethlehem Steel Co., Sparrows Point, Md.	112	5,000	Do.
Controversy, carpenters' union and employers' association and carpenter contractors, Detroit, Mich.	1,000	2,500	Adjusted.
Threatened strike, United Railways, Detroit, Mich.	3,500	.....	Do.
Strike, Baker Packing Co., Chicago	90	.....	Do.
Strike, bakers and cracker packers, Loose-Wiles Biscuit Co., St. Louis, Mo.	265	450	Pending.
Strike, bakers and cracker packers, Union Biscuit Co., St. Louis, Mo.	175	.....	Do.
Strike, woodworkers, St. Louis, Mo.	300	350	Adjusted.
St. Louis Bank Equipment Co. Loughman Cabinet Co. Staudte & Rueckoldt Co. Claes & Sehnbeuter Co. G. A. Hasemen & Sons. Missouri Stair Co. John Reinhard.			
Strike, ironworkers, Hager & Sons Hinge Co., St. Louis, Mo.	250	300	Do.
Controversy, Susquehanna Coal Co. and miners, Williamstown, Pa.	60	2,000	Pending.
Lockout, Reliable and Model Belt Cos., Chicago, Ill.	70	.....	Do.
Controversy, Newcomb Glass Co. and packers, Royersford, Pa.	12	170	Do.
Controversy, Landis Tool Co. and machinists, Waynesboro, Pa.	1,000	.....	Do.
Controversy, Laborers' Protective Union and Employers' Association, Havre, Mont.	90	300	Adjusted.
Controversy, Hotel Keepers' Association and Waiters' Union, Chicago.	.....	.....	Pending.
Strike, carpenters, United Verde Extension Smelter, Jerome, Ariz.	64	1,500	Adjusted.
Strike, street railway employees, Springfield Consolidated Ry. Co., Springfield, Ill.	134	.....	Pending.
Controversy, Bethlehem Steel Co. and electrical workers, Allentown, Pa.	450	28,000	Do.
Strike, Hartford-New York Transportation Co., Hartford, Conn.	.....	.....	Do.
Strike, Larrowe Construction Co., Whitehall, Mont.	150	400	Do.
Threatened strike, Kingsford Foundry & Machine Works, Oswego, N. Y.	59	100	Adjusted.
Strike, painters, Richmond, Ind.	.....	.....	Pending.
Controversy, Lyons-Atlas Co. and pattern makers, Indianapolis, Ind.	.....	.....	Adjusted.
Controversy, Nuckolls Packing Co., Pueblo, Colo.	110	.....	Company claimed they could not grant demands of men; after conferences with both sides it was agreed there would be no strike.
Strike, machinists, Ellington Electric Co., Quincy, Ill.	6	15	Adjusted.
Strike, machinists, Hollister & Whitney Co., Quincy, Ill.	12	20	Do.
Strike, machinists, Dayton & Dick Co., Quincy, Ill.	45	115	Do.
Strike, Continental Can Co., Chicago, Ill.	75	.....	Pending.
Strike, electricians and machinists working at Otis elevator and Pennsylvania freight depot, Chicago, Ill.	100	.....	Do.
Strike, iron molders, Chicago, Ill.	1,000	500	Matter referred to National War Labor Board.
Controversy, Public Utilities Co. and Association of Commerce, Bloomington, Ill.	.....	.....	Pending.
Strike, White-Washburne Co., Hinsdale, N. H.	8	60	Adjusted.
Threatened strike, telegraphers, Oakland, Cal.	.....	.....	Pending.
Threatened strike, National Refining Co., Coffeyville, Kans.	350	50	Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, APR. 15 TO MAY 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, sheet-metal workers and upholsterers, St. Louis, Mo. Mound Casket Co. Riddle Casket Co. St. Louis Coffin Co. Kregel Casket Co.	180	450	Adjusted.
Strike, Carroll Foundry & Machine Co., Bucyrus, Ohio	53	250	Pending.
Controversy, Midvale Steel Co., and machinists, Philadelphia.	.....	.....	Do.
Controversy, Fire Fighters' Association and City Commission, Mobile, Ala.	35	63	Do.
Controversy, Snow Steam Pump Works and metal trades, Buffalo, N. Y.	800	.....	Do.
Threatened strike, machinists, Trout King Pump Works, Buffalo, N. Y.	130	70	Do.
Lockout, Stahl-Urban & Co., Terre Haute, Ind	.....	.....	Adjusted.
Threatened strike, cranemen, etc., General Electric Co., Pittsfield, Mass.	103	7,000	Do.
Threatened strike, employees belonging to 8 other unions, Pittsfield, Mass.	1,500	.....	Do.
Threatened strike, cranemen, etc., General Electric Co., Schenectady, N. Y.	325	23,000	Do.
Threatened strike, Green Bay Paper & Fiber Co., Green Bay, Wis.	265	.....	Do.
Threatened strike, Smith & Rumery Co., Portland, Me	150	.....	Do.
Controversy, Ever Ready Light Co., Long Island City, N. Y.	125	1,600	Pending.
Threatened strike, Milwaukee Electric Ry. & Light Co., Milwaukee, Wis.	1,456	2,624	Adjusted.
Strike, Western Automatic Screw Co., Elyria, Ohio	185	182	Company declined mediation; commissioner withdrew from case.
Threatened strike, Chester, Pa	.....	.....	Pending.
Controversy, electrical workers, Indianapolis, Ind	.....	.....	Adjusted.
Threatened strike, Cleveland Street Ry. Co., Cleveland, Ohio.	2,500	.....	Do.
Strike, American Can Co., Chicago	70	.....	Do.
Controversy, Pittsburgh Street Ry. Co., Pittsburgh, Pa	3,000	.....	Adjusted by United States District Attorney E. Lowry Humes.
Controversy, The American Propeller & Manufacturing Co., Baltimore, Md.	124	368	Adjusted.
Controversy, Master Builders' Association and Carpenters' Union, Erie, Pa.	.....	.....	Pending.
Strike, construction employees affiliated with Cleveland Building Trades, Cleveland, Ohio.	15,000	.....	Do.
Threatened strike, hydro-electric operators and linemen, Cumberland and York Counties light and power supply to 21 cities, and furnishing trolley power to 39 cities and towns, Maine.	141	.....	Adjusted.
Controversy, Western Instrument Co. and metal polishers, Chicago, Ill.	6	140	Pending.
Strike, Rockford Machine & Tool Co., Rockford, Ill	75	.....	Adjusted.
Controversy, Nordyke & Marmon Co., and machinists, Indianapolis, Ind.	.....	.....	Pending.
Strike, machinists, Budd Wheel Co., Philadelphia	.....	.....	Do.
Threatened strike, shop employees, Benjamin Iron & Steel Co., Hazelton, Pa.	.....	.....	Do.
Controversy, Worthington Pump Co. and machinists, Cambridge, Mass	1,100	2,100	Do.
Threatened strike, coopers, 3 firms, Chicago, Ill	120	200	Do.
Controversy, linemen, Wheeling, W. Va	.....	.....	Do.
Controversy, Philadelphia Rapid Transit Co., and motormen and conductors, Philadelphia.	.....	.....	Do.
Controversy, Western Cold Storage Co., Chicago, Ill	30	130	Do.
Controversy, electricians, Rochester, N. Y	300	.....	Do.
Controversy, lumber industry, Van Buren, Me	.....	.....	Referred to National War Labor Board.
Controversy, Wildman & Luster Jordan and machinists, Norristown, Pa.	.....	.....	Pending.
Controversy, Southern Express Co., Jacksonville, Fla	.....	.....	Do.
Controversy, Willys-Overland Automobile Co., and molders, Toledo, Ohio.	.....	.....	Do.
Controversy, Toledo Ship Building Co., and molders, Toledo, Ohio.	.....	.....	Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, APR. 15 TO MAY 14, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Threatened strike, building trades, Wellman, Seaver & Morgan Co., Akron, Ohio.			Unable to adjust.
Controversy, Willys-Overland Automobile Co. and electrical workers, Elyria, Ohio.			Pending.
Controversy, Werner & Pfleiderer Co. and machinists and helpers, Saginaw, Mich.	160		Do.
Controversy, Lake Ship Building Co., Chicago, Ill.	300	1,700	Adjusted.
Controversy, Russell Motor Co. and metal trades, Buffalo, N. Y.	300		Pending.
Controversy, Shickler Co. and allied building trades constructing Pennsylvania freight depot, Buffalo, N. Y.			Adjusted.
Strike, cigarmakers, Offterdinger factory, Washington, D. C.	57	65	Do.
Controversy, Swift & Co., Los Angeles, Cal.			Pending.
Strike, wire workers, John A. Roebling, Trenton, N. J.	900		Do.
Threatened strike, International Street Railway Co., Buffalo, N. Y.	2,000		Adjusted.
Strike, Virginia City, Nev.			Pending.
Controversy, Weidmann Co., and others, Paterson, N. J.			Do.
Walkout, plasterers, Fort Des Moines, Iowa			Do.
Strike, teamsters, Bloomington, Ill.			Do.
Lockout, machinists and blacksmiths, St. Marys Oil Engine Co., St. Charles, Mo.			Do.
Threatened strike, Morrill Packing Co., Sioux Falls, S. Dak.	500		Adjusted prior to commissioner's arrival.
Strike, automobile mechanics, T. B. Martindale, Philadelphia.			Pending.
Strike, molders, Winslow Government Bonded Scale Works (Inc.), Terre Haute, Ind.	90		Adjusted.
Strike, machinists, Connersville, Ind.			Do.
Controversy, Employer's Association and organized labor, Lewistown, Mont.			Pending.
Strike, barbers, Chicago, Ill.	2,500	250	Do.
Controversy, canneries and food packing industries, California.			Do.
Strike, teamsters, Great Falls, Mont.			Do.
Controversy, Amercian Shipbuilding Co., Lorain, Ohio			Adjusted.
Threatened strikes, 55 packing houses, Chicago, Ill.			Pending.
Controversy, Foote Bros. Gear Cutting Co., Chicago, Ill.	300		Do.
Strike, Ohio State Telephone Co., Youngstown, Ohio			Do.
Strike, Cramer & Sherr, Philadelphia			Do.
Strike, Scranton Bolt & Nut Works, Scranton, Pa	300		Do.
Controversy, New England Fuel & Transportation Co. and International Union of Steam and operating engineers, Boston, Mass.			Do.
Controversy, Bell & Cuyahoga Telephone Companies, Cleveland, Ohio.			Do.
Controversy, Bakers' & Confectioners' Union No. 16 and Master Bakers, Buffalo, N. Y.			Do.
Controversy, Standard Boiler Plate Co. and boilermakers, E. S., East St. Louis, Ill.			Do.
Strike, street railway employees, Rochester, N. Y.			Do.
Controversy, University of Michigan and electricians, Ann Arbor, Mich.			Do.
Strike, carpenters, St. Louis, Mo. American Fixture Co. H. Pauk & Sons. M. A. Heiman Mfg. Co. Lehnbeuter-Deochman Mfg. Co.	145	250	Adjusted.
Threatened strike, shipping room employees, Haas-Lieber Grocery Co., St. Louis, Mo.	55	150	Do.

The following cases noted as pending in the April statement have been disposed of:

Strike, machinists, American Engineering Co., Philadelphia. Half of men returned to work; remainder who were workmen of inferior skill assembled promiscuously.

Strike, machinists, Fayette Plumb Tool Co., Wellston, Mo. Case turned over to Maj. Tole; commissioners did not work on case.

Controversy, Chas. Weitz Sons and linemen, Des Moines. Adjusted.
Strike, Mackel Construction Co., Atlanta and Fort McPherson, Ga. Adjusted.
Threatened strike, longshoremen, New York. Adjusted.
Controversy, Western Union Telegraph Co., Birmingham, Ala. Referred to National War Labor Board.
Strike, St. Louis Screw Co., St. Louis, Mo. Referred to National War Labor Board.
Strike, Garment Workers, St. Louis, Mo. Referred to National War Labor Board.
Lockout, molders, Hawkeye Foundry Co., Waterloo, Iowa. Adjusted.
Controversy, Bond Machine Co., Wilmington, Del. Strikers all employed elsewhere; company refused to meet with representatives.
Controversy, electrical workers, Erie, Pa. Adjusted.
Strike, metal polishers and job platers, Los Angeles, Cal. Unable to adjust.
Strike, Goodyear Tire & Rubber Co., Akron, Ohio. Men individually applied for reinstatement, and strike declared off.
Lockout, carpenters, Memphis, Tenn. Adjusted.
Strike, bottle workers, C. L. Flaccus Glass Co., Tarentum, Pa. Unable to adjust.
Strike, Mallinckrodt Chemical Co., St. Louis, Mo. Adjusted.
Controversy, Steinle-Turret Machine Co., Madison, Wis. Adjusted.
Controversy, Richards Manufacturing Co. and machinists, Manitowoc, Wis. Adjusted.
Controversy, Aluminum Goods Co., Manitowoc, Wis. Adjusted.
Controversy, laundry workers, West End Laundry, Lange Laundry, St. Louis, Mo. Picketing ceased, and strike abandoned before commissioners called on employers.
Controversy, electrical workers and contractors, Wheeling, W. Va. Adjusted.
Strike, hod carriers and laborers, New York. Adjusted prior to commissioners arrival.
Strike, sheet metal workers, St. Louis Metal Ware Co., St. Louis, Mo. Referred to National War Labor Board.
Strike, sheet metal workers, Handlan Buck Railways Supply Co., St. Louis, Mo. Strike called off before commissioners acted.
Strike, Newborn & Co., New York. Company decided to take off one shift and dispense with services of men in question as far as possible.
Controversy, Smalley-General Co. and machinists, Bay City, Mich. Unable to adjust.
Controversy, American-British Co. and machinists, Providence, R. I. Adjusted.
Controversy, Schwartz Wheel Co., Philadelphia. Adjusted.
Controversy, DePere Manufacturing Co., DePere, Wis. Adjusted.
Controversy, Swift & Co., St. Joseph, Mo. Not necessary to appoint commissioner.
Controversy, Mahoning & Shenango Ry. & Light Co., Youngstown, Ohio. Adjusted.
Strike, U. S. Metals Refining Co., Chrome, N. J. Adjusted.
Strike, American Smelting & Refining Co. and Raritan Copper Co., Perth Amboy, N. J. No strike; commissioner did not act.
Lockout, sheet metal workers, U. S. Aero Propeller Co., Milwaukee, Wis. Adjusted.
Controversy, typographical union, Denver, Colo. Adjusted.
Strike, Southern Pacific Steamship Line, New York. Adjusted. (This was reported in statement as Southern Pacific Shops.)
Controversy, textile workers, Sanford, Me. Unable to adjust.
Controversy, hatters, Danbury, Conn. Unable to adjust.
Controversy, structural-iron workers on cantonment, Des Moines, Iowa. Work at cantonment finished; case closed.
Sympathetic strike, Waco, Tex. Adjusted.
Strike, Leslie & Elliott Co., Paterson, N. J. Adjusted.
Strike, machinists, Marine Repair Shops and Marine Railways, Norfolk, Va. Adjusted.

The following strikes were declared off and commissioners did not act.

Strike, Plum Tool Co., St. Louis, Mo.

Strike, garment workers, several shirt factories, St. Louis, Mo. (same case as garment workers, St. Louis).

Strike, Samuel Cupples Envelope Co., St. Louis, Mo.

Strike, Ornament, Wire & Iron Co., St. Louis, Mo.

Strike, Kroger, Groceries and meat, St. Louis, Mo.

Threatened strike, Hudson and Manhattan Tubes, New York. Adjusted.

Strike, hatters, South Norwalk, Conn. Unable to adjust.

Controversy, Merchants & Evans Co. and machinists, Philadelphia. Adjusted.

Controversy, Hartford & New York Transportation Co. and longshoremen, New York. Adjusted.

STRIKES AND LOCKOUTS.

LABOR DISPUTES IN CANADA IN 1917.

The May issue of the MONTHLY REVIEW (pages 297 to 299) contains some statistics on strikes and lockouts in Canada from 1901 to 1916, inclusive. This information has been supplemented by a report subsequently received by this bureau, through the Department of State, from the American consul in Kingston, Canada, presenting Government figures on 148 strikes (7 carried over from 1916) and 1 lockout in 1917, involving 42,329 employees, 714 employers, and a total time loss of 1,134,970 working days. This time loss, it is stated, has been exceeded only three times in the 17 years of departmental record, namely, in 1903 with 1,226,500 days lost, in 1911 with 2,046,650 days lost, and in 1913 with 1,287,678 days lost.

It appears that the most serious disputes during the year occurred in the great mining areas of British Columbia and Alberta, known as District No. 18 of the United Mine Workers of America, where on January 16 some 5,870 coal miners and coke-oven employees went on strike, which entailed a time loss of 42,000 days before settlement was effected. Again, on April 1, 7,475 employees in the same district went on strike, which was not terminated until July 3, when the Dominion Government appointed a director of coal operations to take control of the mines. This dispute, it is reported, involved a time loss of 512,075 working days, or 45.1 per cent of the total time loss of the year. Another serious strike reported was that of 1,600 employees at the smelter at Trail, British Columbia, which began November 15 and caused a time loss of 48,000 days.

These are the major disputes which occurred during the year. The departmental report suggests that a large number of disputes were of minor importance, not more than 650 employees being involved in 32 per cent of the cases, and not more than 100 work people in about half of the cases. The time loss was also comparatively small in many of these disputes, being less than 500 days in 42 per cent. In one-third of the disputes settlement was reached in 5 days or less; in 56 per cent, less than 10 days elapsed before final adjustment, and in 69 per cent less than 15 days were required to effect settlement. Fifteen per cent of the disputes endured for more than 30 days.

Although most of the disputes (36 per cent), according to the record, occurred in Ontario, Alberta stood first, British Columbia second, and Quebec third in the amount of time lost, with 34.2 per cent, 29.1 per cent, and 25.6 per cent, respectively. At this point departmental report submitted by the American consul at Kingston continues:

As usual the time loss in mining—55 per cent of the total—was greater than in any other industrial group, although only 14 per cent of the total number of disputes is

charged to the industry. From the standpoint of time lost, the clothing trade was second with 24 per cent of the total time loss of the year and only 8 per cent of the total number of disputes. Mining also stood first from the standpoint of work people affected with 18,729, or about 39 per cent of the total. In transportation, 8,258 employees were involved, or 17 per cent of the total, and in clothing the number of employees affected was 6,983, or 14 per cent of the total. The metals, machinery, and conveyances group was charged with higher percentage of the total number of disputes than any other group—25.8 per cent—but the time loss in this group was only 6 per cent of the total.

In the disputes of the year the question of wages was the most important cause, 74 disputes, or 50 per cent of the total number, being due to requests for increased wages, and 22 disputes, or 15 per cent of the total, to requests for increased wages and other changes. Thus the demand for higher wages was the dominant cause in 65 per cent of the disputes. In 15 cases, or 10 per cent of the total, the dispute was due to a request for shorter hours. In about 3 per cent of the disputes the dominant cause was a demand for recognition of the union, "closed shop," or other trade union principles.

The figures show that 82 disputes, or 56 per cent of the total number were terminated in favor of the employees, while 31 disputes, or 21 per cent of the total, terminated in favor of the employers. In 20 per cent of the cases the disputes ended in a compromise, and 4 per cent were indefinite or unterminated. Of the total number of employees concerned, 62 per cent were involved in disputes which resulted in favor of employees, 13 per cent in disputes which terminated in favor of employers, and 23 per cent in disputes which were compromised. Comparing the results of the disputes and of the number of work people affected, it is shown that the employees were more successful in disputes in which comparatively large numbers of them were involved. The disputes decided in favor of employees concerned 368 work people on an average, while the corresponding average in disputes in which the termination favored the employers was 206.

As to methods of settlement, 89 disputes, or 60 per cent of the total, were settled by direct negotiations between the parties, and 13 disputes, or about 9 per cent, were settled by conciliation or mediation, and in 11 cases, or about 7 per cent of the total, settlement was effected by arbitration. Four disputes were settled by reference to boards of conciliation under the industrial disputes investigation act.

The following table, showing particulars as to strikes in Canada during 1916 and 1917, supplements the table which appeared in the MONTHLY REVIEW for May (p. 298), which did not include the record for 1916:

STRIKES IN CANADA DURING THE YEARS 1916[1] AND 1917.

Item.	1916	1917	Per cent of increase.
Number of disputes	75	[2] 148	97.3
Establishments[3] involved	211	714	238.4
Employees involved	21,157	[2] 42,329	100.1
Working days lost	208,277	1,134,970	444.9
Average days lost per employee involved	9.844	26.813	172.4
Per cent of total time lost on account of strikes in—			
Mining	42.55	55	29.3
Clothing	9.29	24	158.5
Metal trades	15.91	6	[4] 62.3
Building trades	1.98	(5)	.....
Food, liquors, tobacco	11.03	(5)	.....
General transport	13.10	(5)	.....
Woodworking trades	.90	(5)	.....
Miscellaneous	1.55	(5)	.....
Unskilled labor	3.67	(5)	.....

[1] Data for 1916 taken from Report on Strikes and Lockouts in Canada, 1901-1916, pp. 58-63.
[2] It is not clear from the report furnished by the American consul at Kingston whether this includes 1 lockout involving 100 knitting-mill operatives.
[3] Reported as "employers" in 1917.
[4] Decrease.
[5] Not reported in departmental statement received from the American consul at Kingston.

IMMIGRATION.

IMMIGRATION IN FEBRUARY, 1918.

The number of immigrant aliens admitted into the United States during the year 1917 as compared with the number admitted during the year 1916, decreased 56.9 per cent. During 1917 the decrease from the preceding month for January, February, and March was 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted showed an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May showed a decrease of 48.9 per cent. The figures for June indicated an increase of 5.5 per cent over those for May. During July only 9,367 immigrant aliens were admitted. As compared with the figures for July, those for August showed an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August, the figures for September showed a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. The admissions in November numbered only 6,446, a decrease of 30.6 per cent from the number admitted in October. In December there was an increase of 8.4 per cent. In January, 1918, there was a decrease of 9 per cent as compared with December, 1917. February, however, showed an increase over January of 16.2 per cent.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	1918	
						Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	24,745	6,356	[1] 9.0
February	59,156	46,873	13,873	24,740	19,238	7,388	16.2
March	96,958	92,621	19,263	27,586	15,512		
April	136,371	119,885	21,532	30,560	20,523		
May	137,262	107,796	26,069	31,021	10,487		
June	176,261	71,728	22,598	30,764	11,035		
July	138,244	60,377	21,504	25,035	9,367		
August	126,180	37,706	21,949	29,975	10,047		
September	136,247	29,143	21,513	36,398	9,228		
October	134,440	30,416	25,450	37,056	9,285		
November	104,671	26,298	24,545	34,437	6,446		
December	95,387	20,944	18,901	30,902	6,987		

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into the United States during specified periods and in February, 1918, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN FEBRUARY, 1918, BY NATIONALITY.[1]

Nationality.	Year ending June 30—			July, 1917, to February, 1918.	February, 1918.
	1915	1916	1917		
African (black)	5,660	4,576	7,971	3,918	163
Armenian	932	964	1,221	185	6
Bohemian and Moravian	1,651	642	327	54	4
Bulgarian, Serbian, Montenegrin	3,506	3,146	1,134	89	14
Chinese	2,469	2,239	1,843	1,238	73
Croatian and Slovenian	1,942	791	305	26	6
Cuban	3,402	3,442	3,428	879	44
Dalmatian, Bosnian, Herzegovinian	305	114	94	10	.....
Dutch and Flemish	6,675	6,443	5,393	1,528	530
East Indian	82	80	69	46	5
English	38,662	36,168	32,246	7,808	847
Finnish	3,472	5,649	5,900	1,462	116
French	12,636	19,518	24,405	4,371	497
German	20,729	11,555	9,682	1,409	120
Greek	15,187	26,792	25,919	2,103	164
Hebrew	26,497	15,108	17,342	2,796	217
Irish	23,503	20,636	17,462	2,840	248
Italian (north)	10,660	4,905	3,796	713	85
Italian (south)	46,557	33,909	35,154	3,998	350
Japanese	8,609	8,711	8,925	6,602	594
Korean	146	154	194	144	4
Lithuanian	2,638	599	479	78	9
Magyar	3,604	981	434	26	10
Mexican	10,993	17,198	16,438	3,347	1,679
Pacific Islander	6	5	10	7	.....
Polish	9,065	4,502	3,109	444	58
Portuguese	4,376	12,208	10,194	1,621	51
Roumanian	1,200	953	522	126	9
Russian	4,459	4,358	3,711	927	112
Ruthenian (Russniak)	2,933	1,365	1,211	35	5
Scandinavian	24,263	19,172	19,596	6,301	538
Scotch	14,310	13,515	13,350	3,131	291
Slovak	2,069	577	244	24	.....
Spanish	5,705	9,259	15,019	4,472	301
Spanish-American	1,667	1,881	2,587	1,410	155
Syrian	1,767	676	976	154	28
Turkish	273	216	454	16	.....
Welsh	1,390	983	793	168	19
West Indian (except Cuban)	823	948	1,369	400	7
Other peoples	1,877	3,388	2,097	197	29
Total	326,700	298,826	295,403	65,103	7,388

[1] The total number of departures of emigrant aliens in February was 14,935

JAPANESE EMIGRATION.[1]

Investigations made by the Tokyo foreign office show that at the end of June, 1917, the total number of Japanese residents abroad was 450,773. These figures indicate an increase of 50,357 as compared with those of the corresponding period of the preceding year. The following table shows the number of residents abroad at the end of June last:

	Men.	Women.
United States	151,606	76,572
Manchuria and Kwantung	60,492	51,766
China and Tsingtao	25,937	21,189
Australia and South Pacific countries	21,441	8,067
Brazil	3,050	2,688
Other States of South America	24,235	2,621
Europe	978	130

[1] From Japanese Gazette of Apr. 1, 1918. Information furnished in report of American consul at Yokohama, Japan, to State Department.

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

COLORADO.—*State inspector of coal mines. Fifth annual report, 1917. Denver, 1917. 96 pp.*

Reports a coal production in 1917 of 12,515,305 tons. There were 188 fatalities, 121 occurring as the result of one explosion. This is one fatality to every 66,571 tons produced, representing a fatality rate of 13.5 per 1,000 men employed. The fatalities from general causes, not counting the 121 fatalities referred to, was an increase of 50 per cent over 1916. There were 1,563 nonfatal accidents, or an increase of 75.8 per cent over the preceding year. The total accident rate in 1917 was 125.3 per 1,000 men employed.

LOUISIANA.—*Department of commissioner of labor and industrial statistics. Ninth biennial report, 1916–1918. New Orleans, 1918. 166 pp. Illustrated.*

Calls attention to some abuses existing in connection with the operation of the employers' liability compensation act of 1914, and in tabulated statement presents the provisions of law now in force, together with suggested changes which it is believed would improve the statute. It is also recommended that the child labor law be amended so as to conform to the Federal child labor law; and that hours of service of women be limited to 8 per day, 6 consecutive days per week. The report includes a table showing union scale of hours and average wage of various classes of skilled labor, and also a table showing the number of employees, hours of service, and average wages paid in various occupations.

MASSACHUSETTS.—*Minimum wage commission. Bulletin No. 14. Wages of women in muslin underwear, petticoat, apron, kimono, women's neckwear, and children's clothing factories. Boston, 1917. 58 pp.*

This report includes data contained in the fourth annual report of the minimum wage commission for the year ending December 31, 1916, which was noted in the MONTHLY REVIEW for May, 1917, pp. 667 to 669.

—— *Minimum wage commission. Bulletin No. 15. Wages of women in shirt, workingmen's garment and furnishing goods factories. Boston, 1918. 58 pp.*

Information as to wages contained in this report may be found in an article on the subject of minimum wage in Massachusetts published in the MONTHLY REVIEW for May, 1917, pp. 667 to 673.

—— *The Constitutional Convention, 1917. Bulletin No. 5. A summary of existing laws on old-age pension systems and a bibliography. Submitted to the constitutional convention by the commission to compile information and data for the use of the constitutional convention. Boston, 1917. 20 pp.*

NEW YORK.—*Industrial Commission. Annual report, 1916. Albany, April 17, 1917. 236 pp.*

That portion of this report dealing with the State workmen's compensation insurance fund is noted on pages 193 to 195 of this issue of the MONTHLY REVIEW.

OHIO.—[*Secretary of State*] *Ohio general statistics for the fiscal year commencing July 1, 1915, and ending June 30, 1916. Vol. II. Springfield, 1917. 374 pp.*

Pages 106 to 126 embrace the report of the Industrial Commission, including a brief statement of the workmen's compensation business for the year. Notes that the Ohio State insurance fund on May 15, 1916, had a total surplus of $916,887.19, and calls attention to the fact that "in view of the violent period of industrial activity through which we have been passing for the last year, which period has necessarily been accompanied by heavy increases in actual pay rolls over estimates, and an inevitable

increase in the frequency of accidents," the fund remained perfectly solvent, making it unnecessary to increase rates in order to produce a greater premium income. During the year 113,678 claims were filed, and 112,744 claims were heard and disposed of. The number of accidents tabulated is 105,667, of which 39,424, or 37.3 per cent, were due to falling and shifting objects, and 28,785, or 27.2 per cent, to machinery.

PENNSYLVANIA.—*Department of Labor and Industries. Workmen's Compensation Bureau. Decisions of the Pennsylvania Workmen's Compensation Board for the year 1916. Harrisburg, 1917. 317 pp.*

VIRGINIA.—*Communication from the governor transmitting the report of the Virginia commission on workmen's compensation. Richmond, Jan. 9, 1918. 32 pp.*

This report is noted on pages 191 and 192 of this issue of the MONTHLY REVIEW.

WISCONSIN.—*Industrial commission. Workmen's compensation insurance. Third annual report. [Madison], Sept. 1, 1917. 23 pp.*

This report is noted on pages 195 and 196 of this issue of the MONTHLY REVIEW.

WYOMING.—*Workmen's compensation department. Second report, 1916–17. Laramie, 1918, 66 pp.*

This report is noted on pages 196 and 198 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Congress. House. Minimum wage for women and children. Hearings before the subcommittee of the Committee on the District of Columbia, Sixty-fifth Congress, second session, on H. R. 10307, providing for the establishment of a minimum wage scale in the District of Columbia for women and children. Washington, Apr. 16, 1918. 44 pp.*

See pages 150 and 151 for a further account of the hearings.

—— —— *Senate. Committee on Civil Service and Retrenchment. Hearings on S. 157, 281, 633, bills for the retirement of employees in the civil service. July 11, 12, 19, 26, and Aug. 8, 1917. Sixty-fifth Congress, first session. Washington, 1917. 266 pp.*

Among the documents presented at these hearings are an article on "The pension problem and the philosophy of contributions," by Paul Studensky, Bureau of Municipal Research, New York City, and the report of the actuary in re civil service pensions, embracing an estimate of the payments proposed for the retirement of employees in the civil service as provided in H. R. 9242, introduced by Mr. Hamill in 1911.

—— —— —— *Minimum wage board. Hearing before the subcommittee of the Committee on the District of Columbia, Sixty-fifth Congress, second session, on S. 3993, a bill to protect the lives and health and morals of women and minor workers in the District of Columbia, and to establish a minimum wage board, and define its powers and duties, and to provide for the fixing of minimum wages for such workers, and to provide penalties for violation of this act. Washington, Apr. 17, 1918. 44 pp.*

A brief account of the hearing and an excerpt from the record are given on pages 150 to 155 of this issue of the MONTHLY REVIEW.

—— *Council of National Defense. Advisory commission. Committee on labor (including conservation and welfare of workers). Welfare series No. 1, Industrial fatigue, 13 pp.; No. 2, Manufacture and loading of high explosives, 19 pp.; No. 3, Code of lighting for factories, mills, and other work places, 26 pp. Washington, January, 1918.*

These reports are reviewed briefly on pages 215 to 219 of this issue of the MONTHLY REVIEW.

—— *Federal Board for Vocational Education. Bulletin No. 7, Emergency war training for motor-truck drivers and chauffeurs, February, 1918, 75 pp.; Bulletin No. 8, Emergency war training for machine-shop occupations, blacksmithing, sheet-metal working, and pipe fitting, February, 1918, 48 pp.; Bulletin No. 9, Emergency war training for electricians, telephone repairmen, linemen, and cable splicers, February, 1918, 31 pp.; Bulletin No. 10, Emergency war training for gas-engine, motor-car, and motorcycle repairmen, March, 1918, 79 pp.; Bulletin No. 13, Agricultural series No. 1, Agricultural education, organization and administration, March, 1918, 43 pp.*

—— *Railroad Administration. Report of the Railroad Wage Commission to the Director General of Railroads, April 30, 1918. Washington, 1918. 150 pp.*

This report is noted on pages 21 to 45 of this issue of the MONTHLY REVIEW.

OFFICIAL—FOREIGN COUNTRIES.

AUSTRALIA.—*Court of conciliation and arbitration. A report of cases decided and awards made in the Commonwealth court of conciliation and arbitration, including conferences convened by the president or deputy presidents, during the year 1916. Commonwealth arbitration reports, vol. 10. Edited by M. C. Boniwell, of the attorney general's department. Melbourne, 1917. 851 pp.*

—— (NEW SOUTH WALES).—*Bureau of statistics. Official yearbook, 1916. Sydney, 1917. 1248 pp. Price, 2s. 6d.*

Contains miscellaneous statistical material usually found in yearbooks. Several items of interest to labor may be noted. The total number of railway accidents in 1916 was 97 fatal and 3,666 nonfatal, an increase over 1915 of 9 per cent and 3 per cent, respectively. On tramways the total number of accidents in 1916 was 33 fatal (the same as in 1915) and 1,264 nonfatal, the latter being 41 less than in 1915. During the year ending June 30, 1916, wages amounting to £6,283,083 ($30,576,623.42) were paid to 48,588 employees on both railways and tramways. This was an average of $629.30 per employee as against $628.01 in 1915.

During 1916 there were 344 dislocations in industry, involving 157,102 workers and a time loss of 895,338 working-days. The mining industry was responsible for 60.8 per cent of the strikes, 82.7 per cent of the employees involved, and 72.5 per cent of the working-days lost. Wages was the cause of dispute in 136 cases.

Data on cost of living, taken from the official yearbook, are noted on page 107 of this issue of the MONTHLY REVIEW.

CANADA.—*Military Hospitals Commission. Report, May, 1917. Ottawa, 1917. 182 pp. Map.*

Gives a table showing the name, location, and accommodation of all institutions operated or used by, or available for the use of, the commission. This accommodation represented 14,949 hospitals, homes, sanitoriums, beds, etc. During the period from January, 1915 (not including February, March, and April), to March, 1917, inclusive, 13,826 men returned from service abroad, 9,124, or 66 per cent, of whom were classified as "men whose condition may be benefited by further medical treatment or rest in a convalescent home, hospital, or sanitorium." Only 864 (6.2 per cent) were classified as "men having a permanent disability which would not be benefited by further medical treatment and whose cases will immediately be considered by the pensions board with a view to pension." Of the 13,826 men returning, 3,514, or 25.4 per cent, returned because of wounds received in service The report refers to the vocational training and reeducation courses arranged by the commission, outlines the scheme of maintenance of men undergoing reeducation, and notes some of the problems of demobilization that will require solution. It should be stated that the work heretofore in charge of the military hospitals commission is now being carried on by the invalided soldiers' commission of the department of soldiers' civil reestablishment.

FRANCE.—*Assemblée. Chambre des Députés. Rapport fait au nom de la commission d'assurance et de prévoyance sociales chargées d'examiner: 1 la proposition de resolution de M. E. Nouhaud tendant a la rééducation professionnelle agricole des blessés et mutilés de la guerre, etc. Paris, 1916. 23 pp. (No. 2435. Chambre des Députés. Onzième législature. Session de 1916. Annexe au procès-verbal de la séance du 28 juillet 1916.)*

Report in the name of the commission of assurance and of social welfare charged with examining: (1) The proposition of M. E. Nouhaud approving the vocational reeducation in agriculture of the wounded and disabled of the War and the application of laws relating to low-price homes, small property, and agricultural credit; (2) the proposition of law of Mm. Queuille, Laurent Eynac, and Paul Laffont (Ariège) to give to wounded soldiers the means of acquiring rural property; (3) the proposition of law

of M. Bonnevay and several of his colleagues—(*a*) to facilitate the acquisition of a house or small property by retired soldiers receiving a pension on account of war wounds or infirmity contracted in the Army and to the pensioned widows of soldiers killed since August 2, 1914; (*b*) to facilitate the acquisition of land by farmers, petty farmers, and agricultural laborers—(4) the proposition of law of M. Jules Siegfried to facilitate the application, in the case of disabled and wounded pensioners and of pensioned widows and children of soldiers who had been killed by the enemy or have died from wounds or diseases contracted in the course of hostilities, of laws regarding low-price homes, small property, small rural holdings, and land credit; (5) the proposition of law of M. Abel Gardey to facilitate the constitution of family goods which can not be distrained in favor of the disabled and wounded of the war.

—— —— *Sénat. Commission de l'armée. Proposition de loi adoptée par la Chambre des Députés tendant a l'obligation de la rééducation professionnelle des blessés et des mutilés de la guerre appelés à beneficier de la loi sur les pensions militaires, transmise par M. le President de la Chambre des Députés à M. le President du Sénat. Paris, 1916. 5 pp. (No. 166. Sénat. Année 1916, session ordinaire. Annexe au procésverbal de la séance du 15 avril 1916.)*

Proposition to make obligatory upon the Government the vocational reeducation of wounded and disabled soldiers who are beneficiaries under the law relating to military pensions; adopted by the Chamber of Deputies and transmitted to the Senate.

—— *Ministère de l'Intérieur. Direction de l'assistance et de l'hygiène publiques. Le Ministre de l'Intérieur à messieurs les prefets. Mutilés de la guerre. Conditions d'admission dans les centres de rééducation professionnelle. Circulaire No. 16. Paris, le 16 février, 1916. 10 pp. Circulaire No. 20. Paris, le 21 mars, 1916. 6 pp. Assistance aux militaires tuberculeux. Comités départementaux et établissements hospitaliers. Installation de pavillons ou de salles d'isolement. Circulaire No. 45. Paris, le 27 Septembre 1916. 2 pp. Circulaire No. 17. Paris, le 2 mars 1917. 2 pp. Rapatriés d'Allemagne atteints de tuberculose. Mesures d'assistance. Circulaire No. 26. Paris, le 31 mars 1917. 2 pp. Circulaire No. 5. Paris, le 15 janvier 1918. 3 pp.*

Circulars addressed to the prefects by the Minister of the Interior regarding the work for disabled soldiers. Circular 16 gives the conditions of admission to centers of vocational reeducation; circulars 20, 45, 17, 26, and 5 concern the special care of tubercular soldiers.

—— *Ministère du travail et de la prévoyance sociale. Statistique générale de la France. Statistique du mouvement de la population. Nouvelle série—Tome II. Années 1911, 1912 et 1913. Paris, 1917. 200 pp.*

Vital statistics for the three years 1911, 1912, and 1913, being the second volume of the new series of statistics of the movement of population, the first volume of which was published in 1912 and covered the four years 1907 to 1910.

GREAT BRITAIN.—*Board of education. Information leaflet. Papers read at a conference on the choice of employment act; with an address by the Rt. Hon. H. A. L. Fisher, M. P., President of the Board of Education. London, 1917. 68 pp. Price, 6d. net.*

The object of the conference referred to "was to consider the need for extending the work carried out under the act, which empowers local education authorities to make arrangements for giving to boys and girls under 17 years of age assistance with respect to the choice of suitable employment, by means of the collection and the communication of information, and the furnishing of advice." Papers read at the conference covered such subjects as, The authority and the juvenile, Undesirable employments, The perils of demobilization, After-care work: an opportunity for social service; and The problem in rural areas.

—— —— *Memorandum of the results of an inquiry made by inspectors of the board of education in an urban district in the suburbs of London into (a) the working of the system of labor certificates; (b) the employment of children who are in attendance at public elementary schools. London, 1918. 8 pp. Price, 1d. net.*

This inquiry, made in an industrial area including many "workers for those occupations which are most undesirable and least remunerative," was confined to the following questions:

(1) Do the dull, average, or backward children enter for the examination, or are they the bright children who have passed quickly through the school?

(2) What classes of work are taken up by the children who pass the examination? (*a*) What proportion go to permanent work which offers a prospect of promotion? (*b*) What proportion go to temporary and casual employments?

(3) How many children are employed out of school hours, how are they employed and remunerated? To what extent are the entrants for the examination drawn from the children so employed?

The results of the inquiry are thus briefly summarized:

(1) The great majority of the entrants for the examination are backward children.

(2) A very large proportion of the successful candidates enter unsuitable and blind-alley employment.

(3) The machinery for the supervision of their choice of work is inadequate.

(4) About 10 per cent of the children in attendance at public elementary schools in the area are employed out of school hours, often in most unsuitable work and for inadequate pay.

(5) The effects of this work are detrimental to their progress in school.

GREAT BRITAIN.—[*Colonial office*] *Empire settlement committee. Report to the secretary of state for the colonies of the committee appointed to consider the measures to be taken for settling within the Empire ex-service men who may desire to emigrate after the War. London, August, 1917. 62 pp. Price, 9d. net.*

Opportunities offering to ex-service men for settlement on the land are in this report considered by Government schemes and by schemes of private companies, the first taking up the self-governing Dominions and States that have shown an interest in the development of agricultural settlement at home, including the United Kingdom, Canada, Australia, New Zealand, and the Union of South Africa, and certain subdivisions of each except New Zealand. The report also goes into the question of whether the Government should train intending emigrants, the question of the disabled man, the question of emigration of the families of ex-service men, the question of transport to overseas Dominions, the question of what financial aid the Government will have to render to help men attain their desire, and the question of the constitution of a central authority to supervise and assist the emigration of ex-service men. Briefly summarized, the committee concludes that many thousands of ex-service men may be accommodated in the Dominions; that preference should be given to married emigrants; that the capital needed by prospective settlers ranges from a small sum in parts of Canada to £1,000 or £1,500 ($4,866.50 or $7,299.75) in South Africa; that it is not expedient to establish Government farms for the training of ex-service men who desire to settle on the land in oversea Dominions; that there are few opportunities abroad for even partially disabled ex-service men from the United Kingdom; and that a central emigration authority should be established to deal with the whole question of emigration and in particular with the emigration of ex-service men.

—— *Manuals of emergency legislation. Food (supply and production) Manual, [first enlarged edition, superseding food supply manual of May, 1917]. Revised to October 21, 1917. Comprising all the food supply and production legislation, the orders thereunder of the food controller, etc. Edited by Alexander Pulling, C. B. London, January, 1918. 630 pp.*

—— *Ministry of reconstruction. Committee on relations between employers and employed. Second report on joint standing industrial councils. London, 1918. 7 pp. Price, 1d. net.*

Reference to this report was made in the May, 1918, issue of the MONTHLY REVIEW, pages 59 to 61.

—— —— —— *Supplementary report on works committees. London, 1918. 4 pp. Price, 1d. net.*

This report is noted on pages 163 to 165 of this issue of the MONTHLY REVIEW.

NORWAY.—*Riksforsikringsanstalten. Fiskerforsikringen for aaret 1916; ulykkesforsikring for fiskere m. v., utgit av Riksforsikringsanstalten. Christiania, 1917. 17*, 31 pp.*

The following table, made up from this report of the accident insurance system for fishermen in Norway for the year 1916, indicates some of the principal results of the operation of that law since its enactment:

ACCIDENT INSURANCE EXPERIENCE OF FISHERMEN IN NORWAY FOR THE YEARS 1909 TO 1916.

Year.	Number of insured persons.	Number of reported accidents.	Number of compensated accidents resulting in—			Premiums collected.	Compensation paid.
			Death.	Disability.	Total.		
1909	91,240	538	186	236	422	$37,110	$42,079
1910	89,925	464	199	143	342	36,451	48,669
1911	87,832	383	163	128	291	35,538	38,216
1912	89,911	375	137	134	271	36,389	41,509
1913	89,197	388	187	110	297	36,118	55,929
1914	87,614	392	151	119	270	35,505	43,454
1915	88,360	327	103	133	236	35,724	30,666
1916	89,352	246	92	96	188	48,084	50,475

UNOFFICIAL.

AMERICAN INSTITUTE OF ARCHITECTS. *The housing problem in war and in peace. Washington, 1918. 116 pp.*

Includes articles which have appeared in the Journal of the American Institute of Architects, issues of September, 1917, to February, 1918, which are here presented under the general title "What is a House." Considerable space is devoted to a description of Government housing projects in England.

AMERICAN SOCIOLOGICAL SOCIETY. *Social control. Papers and proceedings of the twelfth annual meeting, held at Philadelphia, Pa., December 27 to 29, 1917. Chicago, University of Chicago Press, 1918. 269 pp.*

This volume includes papers on Ideals as a factor in the future control of international society, by George Elliott Howard; Social control of child welfare, by Sophonisba P. Breckenridge; War as a crisis in social control, by Carl Kelsey; Primitive individual ascendancy, by Hutton Webster; Primitive social ascendancy viewed as an agent of selection in society, by F. Stuart Chapin; Survival of primitive controls in frontier or retarded communities, by James Elbert Cutler; The social structure of the northern Algonkian, by Frank G. Speck; The social control of the acquisition of wealth, by Edward Cary Hayes; Motives in economic life, by Carleton H. Parker; Immigration as a problem in social control, by Henry Pratt Fairchild; The immigrant as a problem in community planning, by Grace Abbott; Control of immigration based upon the true demand for labor, by Arthur J. Todd; Social control in a democracy, by Franklin H. Giddings; and Social control in international relations, by Charles Horton Cooley; also reports, minutes, and membership list.

BURRITT, ARTHUR W., AND OTHERS. *Profit sharing. Its principles and practice. New York, Harper & Bros., 1918. 328 pp. Bibliography.*

The authors state "as fundamental to the whole discussion that profit sharing can not be considered as a social panacea. It is not an instrument for making over or revolutionizing the present economic system, but presupposes the regime of private property and the wage system. This book merely endeavors to mark out the place of profit sharing within that system." The volume is the outgrowth of an investigation

undertaken jointly by the authors, all of whom approached the subject with open minds but with somewhat different points of view and ideas as to its practicability, and all of whom reached substantial agreement upon the conclusions set forth. Profit sharing methods, theories, and results are analyzed in the light of this investigation of a number of profit-sharing plants, based upon the experience of both employers and employees, and appendixes give copies of the plans of a number of individual companies.

CAMPBELL, AGNES. *Report on public baths and washhouses in the United Kingdom. Carnegie United Kingdom Trust. Edinburgh, University Press, 1918. 265 pp. Illustrated.*

Based on a comprehensive inquiry into the subject of public baths and washhouses. The first section gives a general survey of the movement, including the history, legislation, and various aspects of the problems under consideration. Sections II to VI are devoted to detailed treatment of the problems involved with suggestions in regard to their solution. Sections VII to IX contain a survey of construction, administration, and finance; and section X deals briefly with certain broad principles relative to the subject. Appendixes contain Detailed statistics of public baths and washhouses in the United Kingdom; Places with minor facilities or from which no information has been obtained; School baths in the United Kingdom; and Text of legislation in regard to public baths and washhouses.

CANADIAN PACIFIC RAILWAY CO. *Department of natural resources. Returned veterans' colonies. Details and forms connected with the settlement of returned soldiers on the company's land in western Canada. 1916. 26 pp.*

COMMONS, JOHN R., AND OTHERS. *History of labor in the United States. New York. The Macmillan Co., 1918. Vol. I, 623 pp.; Vol. II, 620 pp. Bibliography.*

This work forms the fourth of a series designed to include a divisional history from each of 12 divisions composing the department of economics and sociology of the Carnegie Institution of Washington, D. C., according to a general plan for studying the economic history of the United States. The introductory note, by Henry W. Farnam, explains the plan of this series of studies and the work so far accomplished, and the two volumes are divided into six parts: Colonial and Federal beginnings; Citizenship; Trade unionism; Humanitarianism; Nationalization; and Upheaval and reorganization. These volumes "deal mainly with the history of labor conditions, of labor philosophies, and of labor movements—not primarily with the structure or policies of labor unions, nor with the history of individual unions, nor with the legislative results of movements, nor with current problems. Their field is rather the background, which explains structure, policies, results, and problems."

COOPERATIVE WHOLESALE SOCIETIES (LTD.). *Annual, 1918. Manchester [England], 1 Balloon Street, 1918. 332 pp. Illustrated.*

Report of the Cooperative Wholesale Society (Ltd.), and of the Scottish Cooperative Wholesale Society (Ltd.), giving progress of the societies, lists, and illustrations of business premises owned by them, lists of committees, statistics, and other matter of interest, and articles on Economics of reconstruction—steps to the cooperative commonwealth; the wholesale in recent years—the story of the C. W. S., 1913-1917; National housing after the war; Excess-profits duty; Small holdings and cooperation; the Russian cooperative movement—its fabulous growth and portentous history; and National guilds—the new trade-unionism.

DE FLEURY, R. *La production industrielle intensive: son influence sur le prix de revient. Paris, H. Dunod et E. Pinat, 1917. 72 pp.*

A technical study of intensive industrial production in its influence upon the relation of profits to cost of production. The author divides the causes which can influence the prosperity of an enterprise into two classes: Those of a material order

"which the eye of the master can discover and estimate in a large measure"; and those of an economic order "which are discoverable only by computation based upon the knowledge of certain exact principles of industrial economy"; and reaches the conclusion that it is intensity of production in proportion to the sum of the industrial means put into a work which constitutes the basis of the prosperity of an enterprise, and that this applies not only to industries, but even to nations, whose capacity for production is their most real source of wealth.

DE PAEUW, LÉON. *La rééducation professionnelle des soldats mutilés et estropiés. Paris, Berger-Levrault, 1917. 245 pp. 7 form models. Illustrated.*

This volume is based upon one year's experience in charge of the vocational reeducation of war invalids in Belgium. The author, who is general inspector of primary instruction of Belgium, considers the advantages of obligatory vocational reeducation for disabled soldiers, the employment and protection of them during and after the War, and related subjects, and gives an account of the work in the Belgian centers of reeducation. All of the work of printing, illustrating, binding, and cover designing of the book was done by disabled soldiers who were pupils of the apprentice shops or reeducational schools in charge of the author. There is a prefatory letter by Mme. Henry Carton de Wiart. A mimeographed translation of this work has been prepared in the office of the Surgeon General of the United States.

DRAKE, BARBARA. *Women in the engineering trades. A problem, a solution, and some criticisms; being a report based on an inquiry by a joint committee of the Fabian research department and the Fabian women's group. London, George Allen & Unwin (Ltd.), 1917. 143 pp.*

This publication is noted on pages 156 to 160 of this issue of the MONTHLY REVIEW.

DUPLESSIX, E. *La renaissance industrielle en France et les lois sur les sociétiés. Extrait de la circulaire périodique du comité des notaires des départements. Paris, Rousseau et Cie, 1917. 47 pp.*

In this extract from the periodical circular of the committee of notaries of the departments, the industrial renaissance of France and the laws regarding societies are considered in two parts. The first contains a general exposition of the subject and the second gives the project for recasting the French laws regarding societies and for the creation of consulting commercial committees.

EATON, JOSEPH J. *Record forms for vocational schools. School efficiency monographs. Yonkers, N. Y., World Book Co., 1917. 56 pp.*

A system of records, criticisms, and tabulated reports arranged specifically for use in vocational schools conducted as part of the public-school system. The author is director of industrial arts and vocational education, Yonkers, N. Y., and these forms are based upon his 20 years' experience in vocational schools, and also upon the 11 years' experience of James F. Clinnin in the commercial field as certified public accountant and efficiency engineer specializing in factory work.

GRAY, HOWARD L. *War-Time Control of Industry. The Experience of England. New York. The Macmillan Co., 1918. 307 pp.*

In this book on war-time control of industry in Great Britain, the author discusses the railways, munitions and labor, coal mines, wool and woolens, hides and leather, shipping, food, and agriculture. He concludes that "In its administration of the railways the Government has been more fortunate than in any other of its essays in State control." Governmental traditions in Great Britain and the United States are contrasted, and some interesting comparisons are made in regard to industrial control in the two countries. The author brings out strongly the war-accentuated importance and difficulties of maintaining industrial peace. He traces the gradual disintegration of the hope that voluntary cooperation in the United States can accomplish what has been achieved in England by State control.

LA GUERRE ET LA VIE DE DEMAIN. *Conférences de l'alliance d'hygiene sociale. 1914–1916. Vol. I, II. Paris, Felix Alcan, 1917.*

The reports of these conferences, held in 1914–15 and 1915–16, appear in three volumes. The first volume, "Enfance et jeunesse," which appeared in 1916, discusses child welfare; school hygiene; education, primary, secondary, and university; apprenticeship, and other related subjects. The second volume, published in 1917, under title "Les Risques immédiats de la guerre et leur réparation," deals with the following problems, for the period from the beginning of the War to December, 1915: Hygiene in the invaded territory of France; Reeducation of the disabled with a view to future employment; Provision for victims of tuberculosis; Unemployment and placement, including the work of various employment agencies during this period; Wages; Housing; Food, and the War resources of France. The third volume, "Les Risques futurs de la guerre et la réorganisation de la France," has not yet reached this Bureau.

GUYOT, CHARLES ET DE LA ROUSSIÈRE, R. ROULLEAU. *Les accidents du travail en matière forestière. Commentaire théorique et pratique de la loi du 15 juillet 1914. Paris, Berger-Levrault, 1917. 119 pp.*

A reproduction of articles originally written for the Bulletin du Comité des Forets, and rearranged in the form of a commentary upon the conditions of the law of July 15, 1914, regarding labor accidents in forestry. It deals with the applications of the law, obligations of employers in case of accidents, and accident insurance, and gives the text of the law which extends to forestry exploitations the law of April 9, 1898, regarding labor accidents.

HANDLING MEN. *Chicago, A. W. Shaw Co., 1917. 200 pp. Illustrated.*

The chapters of this book are written by various employers and assembled under four general heads: Selecting and hiring, How to hold your men, Breaking in and developing men, and Putting more than money in pay envelopes.

HARPER, GRACE S. *Vocational reeducation for war cripples in France. Red Cross Institute for crippled and disabled men, New York, 1918. 99 pp. Illustrated.*

A digest of this book appears on pages 72 to 76 of this issue of the MONTHLY REVIEW.

HARRIS, EMERSON P. (ASSISTED BY EDGAR SWAN WIERS AND FLORENCE HARRIS.) *Cooperation—The hope of the consumer. New York. Macmillan Co., 1918. 328 pp.*

The volume is a drastic indictment of what the author regards as "our wicked and wasteful mercantile distributive system" with its "aggressive selling methods," including advertising and salesmanship evils; its temptations to adulterations and short weights; and its futile and extravagant services to the consumer. The results of competition for profit are, according to Mr. Harris, "antimoral, antisocial, and antieconomic." He believes that "cooperative buying is automatic social welfare" and strongly advocates that the "pull of the consumer be substituted for the push of profits." He gives detailed practical directions for arousing the consumer, training store workers, organizing buying clubs and cooperative societies, starting and running cooperative stores, meeting delivery difficulties, and handling trade-marked goods. The final chapters describe successful European cooperative plans. Interesting accounts of cooperative buying schemes in the United States and Canada are given in Appendix I. Appendix II contains the text of a sample cooperative law.

IDAHO STATE FEDERATION OF LABOR. *Proceedings of the third annual convention, Wallace, Idaho, Jan. 14–18, 1918. [Wallace] 61 pp.*

INDUSTRIAL ORGANIZATION. *Factory management, problems of plant and equipment, wage-payment plans, production and inspection. Chicago, A. W. Shaw Co., 1914. 200 pp.*

Part III, Selecting a wage-payment method, includes chapters on Payment plans and where they fit, Appraising work by time studies, Paying men by the day, Paying men by the piece, and Premium and bonus systems.

JOINT BOARD OF SANITARY CONTROL. *Light and illumination in garment shops. Special bulletin prepared by George M. Price, M. D., director, and Davis H. Tuck, illumination expert, of the Joint Board of Sanitary Control in the Cloak, Suit and Skirt, and Dress and Waist Industries. Bulletin No. 2, 1918. 31 Union Square, New York City. 16 pp. Illustrated.*

Gives suggestions for improving lighting conditions in garment shops, most of which in New York City "are not adequately lighted by day nor properly illuminated at night."

KELLY, ROY WILLMARTH. *Hiring the worker. New York, The Engineering Magazine Co., 1918. 250 pp. Bibliography.*

An attempt to study the employment management movement, based upon the experience of superintendents and employment managers, in the belief that notwithstanding the rapid development and constantly changing ideals of the movement, "enough has been done by many progressive firms to make a summary of their efforts of value, if not as a statement of fixed principles, at least by way of suggesting the possibilities and pointing out the profitable avenues of advancement." The author is director of the bureau of vocational guidance and instructor in education at Harvard University.

KOREN, JOHN, ED. *The history of statistics. Their development and progress in many countries. In memoirs to commemorate the 75th anniversary of the American Statistical Association. New York, The Macmillan Co., 1918. 773 pp.*

Book I contains historical and commemorative addresses and Book II the history and development of official statistics in many countries, including State statistics in the United States.

LABOUR PARTY.—*Seventeenth annual conference, Nottingham [England], 1918. Annual report, statement of accounts, list of affiliated societies, delegates, etc. London, 1918. 88 pp.*

According to this report the total membership of the Labor Party at the end of 1917 was 2,465,131, embracing 123 trade-unions with a membership of 2,415,383. The pamphlet includes the invitation to the international socialist conference at Stockholm on August 15 and following days, the address by Rt. Hon. Arthur Henderson, M. P., at the special party conference on August 10, 1917, and a list of societies affiliated to the Labor Party, number of members, and amounts paid for 1917, the names and addresses of secretaries and of delegates to the Nottingham conference, 1918.

LEBON, ANDRÉ. *Problèmes économiques nés de la guerre. Paris, Payot & Cie, 1918. 274 pp.*

A collection of articles on various economic problems caused by the war, arranged in the chronological order in which they were written. One article is on the subject of Labor after the war and deals with three questions raised in connection with it: What will be the situation of our former workmen when they return to their places in the factories, the fields, and the shops? What will conditions be in regard to feminine labor? and, What place will be given to foreign labor?

MACAIGNE, ANDRÉ. *Notre France d'après-guerre. Comment réorganiser la France. Comment développer ses forces productrices. Solutions pratiques. Paris, Pierre Roger et Cie, 1917. 304 pp.*

This volume on the reorganization and practical development of the productive resources of France after the war contains a chapter on Labor which treats of labor organization after the war, apprenticeship, wages, benefits, skilled labor, and related subjects, and a chapter on Agricultural problems after the war, dealing with agricultural labor, the industrialization of agriculture, the consolidation of rural property, and the sale of agricultural products.

MCMURTRIE, DOUGLAS C. *Reconstructing the crippled soldier. Red Cross Institute for Crippled and Disabled Men, New York, [1918]. 40 pp. Illustrated.*

—— *The organization, work, and method of the Red Cross Institute for Crippled and Disabled Men. New York, [1918]. 34 pp. Illustrated.*

Account of the institution in New York City, founded through the gift of Jeremiah Milbank in 1917 and organized under the department of military relief of the Red

Cross, for the permanent work of vocational rehabilitation of crippled men. "While the establishment of the institute was inspired by a desire to build up reeducational facilities which might be of value to the crippled soldiers and sailors of the American forces, it was felt that the problem of the crippled man was a broad one and in need of attention without discrimination in benefits between civilian and military subjects. * * * It must be borne in mind that the problem of the industrial cripple is greater, numerically considered, than that of the crippled soldier.

NATIONAL COUNCIL AND UNION OF WOMEN WORKERS OF GREAT BRITAIN AND IRELAND. *Handbook and report. London, office of the National Union of Women Workers, Parliament Mansions, Victoria St., SW, 1917–18. 152 pp.*

Contains lists of committees and affiliated societies, membership list, and constitution of the National Union and Council, and a report of the annual meeting held in Y. M. C. A. hall, London, October, 1917.

NATIONAL WORKMEN'S COMPENSATION SERVICE BUREAU. *Secretary augmented standing committee. Report of the work of the augmented standing committee on workmen's compensation insurance rates—1917; together with a brief account of the history and theory of the making of workmen's compensation insurance rates March, 1918. 173 pp.*

"The primary purpose of this pamphlet," as explained in the introduction, "is the publication of the report of the 1917 conference on workmen's compensation insurance rates." Part I is devoted to the history and theory of rate making, Part II to the 1917 conference, and Part III to appendixes containing statistics and other special information.

NEW YORK STATE LIBRARY. *Military information service. America's part in the world war. Books for patriotic Americans. Albany, Division of Instruction, Resource Mobilization Bureau of New York State, 1917. 34 pp.*

Bibliography of publications relating to the War. Contains a section on industrial subjects.

PASSELECQ, FERNAND. *Unemployment in Belgium during the German occupation, and its general causes. London, Hodder and Stoughton, 1917. 92 pp. Price 1s., net.*

A translation of part of a larger work by the author, entitled "Les déportations Belges à la lumière des documents Allemands." It gives an account, based upon copies of German documents, of the "systematic and deliberate steps taken by the Germans to bring about unemployment and the paralysis of Belgian industries and so prepare the way for deporting workmen to Germany." The author is director of the Belgian documentary bureau at Havre.

LA RÉPARATION DES DOMMAGES DE GUERRE. *Conférences faites à l'École des hautes études sociales (novembre 1915 à janvier 1916). Paris, Librairie Félix Alcan, 1917. 254 pp. Bibliothèque générale des sciences sociales (série in-16).*

A collection of monographs prepared for the School of Advanced Social Study, upon the subject of the reparation of the damages of the War, with the view, not of solving directly the problems involved, but of throwing light upon them by setting forth the general ideals toward which the work ought to be directed. Various phases of State responsibility and of international law are considered; one paper concerns war orphans and another pensions and indemnities to combatant and civil victims of the War. The introduction is by M. H. Berthélemy.

SMITH-GORDON, LIONEL, AND STAPLES, LAURENCE C. *Rural reconstruction in Ireland. A record of cooperative organization. London, P. S. King & Son, Ltd., 1917. 279 pp.*

A history of the cooperative movement in Ireland, including an account of the foundation, growth, and functions of the Irish Agricultural Organization Society and of the various other societies and home industries which have grown up in connection with the movement; and chapters on Industrial cooperation and its relation to the agricultural movement, The economic results, and The future development of the movement.

SPARGO, JOHN. *Social democracy explained. Theories and treaties of modern socialism. New York, Harper & Bros., 1918. 338 pp.*

An attempt to state in simple and untechnical language the essentials of the socialism of the Marxian school.

SVENSKA ARBETSGIFVAREFÖRENING. *Arbetarnes löner inom ett antal svenska industrigrenar; undersökning för år 1915 af Svenska arbetsgifvareföreningens statistiska byrå [Svenska arbetsgifvareföreningens lönstatistiska årsbok utgifven af dr. K. Key-Åberg, 1915] Stockholm, 1917, 4 p. l. xxxvi, 382 pp.*

The above yearbook of wage statistics has been prepared by the statistical office of the Swedish employers' association as of the year 1915.

UNWIN, RAYMOND. *Nothing gained by overcrowding; how the garden city type of development may benefit both owner and occupier, by Raymond Unwin . . . [London], 1918, 23 pp.*

The author here indicates the lack of economic advantages in overcrowding houses. Two propositions demonstrated by means of hypothetical examples are, first, that the greater the overcrowding of houses upon the land the higher must be the price that the tenant will pay for the available land which he can use; and second, that the return in increment to owners of land is reduced instead of being increased by the crowding of houses. It is noted, however, that the latter statement is true in the case of a growing town only, for the owners taken collectively and not necessarily for all owners taken individually.

VEILLER, LAWRENCE. *Industrial housing developments in America; Eclipse Park, Beloit, Wis. New York, National Housing Association, 1918. [26] pp. Publication No. 46. Illustrated.*

A reprint from the Architectural Record, March, 1918, describing a development of 350 houses for the employees of a large manufacturing concern. This is a garden village composed entirely of single-family detached houses for mechanics earning $20 or more per week. The houses are principally of frame, some having stucco exterior. All houses are to be sold; none rented. The prices will range from $2,400 for a 4-room house to $3,100 for an 8-room house. Ten per cent cash will be required as a first payment.

WEBB, SIDNEY. *The restoration of trade-union conditions. London, Nisbet & Co. Ltd., 1917. 109 pp. Bibliography.*

—— *The works manager to-day. An address prepared for a series of private gatherings of works managers. London, Longmans, Green and Co., 1917. 162 pp.*

Contains chapters on the function of management, reducing the cost of production, appointments and dismissals, the recognition of trade-unionism, the standard rate, payment by results, the management should have nothing to do with the rate of wages, the "manners" of management, discipline, fatigue, and accidents, "Scientific management" and "Welfare work," and on "Choosing equality."

WOMEN'S NATIONAL LAND SERVICE CORPS. *Annual report, October 1, 1916, to September 30, 1917. London, 59, Upper Baker Street, NW. 1. (Headquarters). [1917]. 31 pp. (In conjunction with the Women's Farm and Garden Union.)*

The objects of the land service corps are "(1) to speed up the recruitment of all classes of women for work on the land, in order to insure the maintenance of the home-grown food supply; (2) to create a favorable opinion as to the value of women's work in agriculture by supplying a body of workers capable of making a good impression, and thereby breaking down the prejudices of those of the agricultural community who are opposed to the employment of women; and (3) to use the members of the corps, not only as units of labor, but as organizers of the work of village women, and as an example and encouragement to these women to come forward."

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